What they think matters!

The role of (meta-)representations of the superordinate group among minority and majority members

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1 Introduction: The relevance of superordinate groups

How do people deal with ethnic and cultural diversity? Though sharing a common ground, members of different social groups often struggle to get along with and respect each other. Sometimes, some subgroups fail to take into account that many other subgroups, such as ethnic minorities, are also part of the larger society. Yet, in the United States, for example, ethnic minorities already constitute about a third of the U.S. population and are expected to become the majority by 2050 (Census Bureau, 2009). In the European Union, the estimated annual immigration rate has been over 3 million since 2004 (eurostat, 2011), and the number of immigrants in Germany has increased from 1% to about 9% or 7 million people in the past 60 years (Bundesamt, 2012). These data illustrate that immigration is a continually ongoing process that significantly and continuously changes the composition of societies.

Such process of change, or the mere perception that change may come, can pose significant challenges and threats to the groups involved (Zárate & Smith, 2010). In 2010, the German politician and banker Thilo Sarrazin – member of the social-democratic party – wrote a book titled "Germany abolishes itself". This book fuelled the already heated integration debate in Germany and generated highly controversial debates on the roots of integration problems and on mutual responsibilities between the German majority and migrant minorities. Most striking was the underlying message that migrants (especially Muslims) threaten Germany's core values and virtues to the extent that Germany's existence is endangered due to the migrants' overly high birth rates as well as their biologically lower intelligence. This perspective not only illustrates how narrowly the group of 'Germans' can be defined – namely in terms of blood – but also how strongly even those who consider themselves to be from the political center can be motivated to resist change and defend the perceived core characteristics of their ingroup when these are thought to be threatened by an outgroup.

With societies becoming more diverse, hitherto existing norms and values may be questioned and redefined, or they may be threatened and defended, or both. For example, in societies with increasing numbers of both second- and third-generation immigrants as well as newly arriving individuals, it may no longer be evident that the receiving majority alone defines and shapes the nation's symbols, norms, and values. Instead, other subgroups will – actively and passively – also become part and thus likewise shape the nation's characteristics. But will dominant majority members and non-dominant minority members agree over how

and to which extent each subgroup influences their common or superordinate group's identity? How will they act and react if they don't?

As a recent example, after Germany's unification, it was consensus that East Germans were worse off than the superior West Germans, who set the standards the East Germans were expected to meet soon. Yet, 15 years later, both groups were found to disagree over how much the West Germans were the entitled to define the norms and standards for all Germans. While West Germans thought that they represented the standard for all Germans, East Germans believed that the West Germans were actually not that normative (Waldzus, Mummendey, Wenzel, & Boettcher, 2004). Thus, the concept of who and what was German was probably defined in quite different ways among East as opposed to West Germans. On the one hand, the West Germans were convinced that their status quo should be retained and therefore expected the East Germans to assimilate to the West German economic, social, and cultural standards. To exemplify attempts to enforce this assimilation process and secure the superior position of the West Germans, in 2005, then Bavarian Prime Minister Edmund Stoiber exclaimed, "I do not accept that East Germany decides over who will become Chancelor in Germany". In response, leading East German politicians expressed their outrage in light of this "unbelievable arrogance" and demanded an apology (Spiegel Online, 2005). On the other hand, the East Germans sought improve their condition without having to assimilate as much, fearing that the superior West Germans would force them to abandon most of their East German identity. That since the fall of Berlin's wall, there has been an increasing tendency to cultivate East German symbols, such as specific manikins on pedestrian traffic lights, presumably illustrates one way to make the East German identity more visible and differentiate it from the West German, but can also be interpreted as a separatist tendency of East Germans to protect and preserve their subgroup's identity. Even though the tensions between East and Wester Germans never escalated, the unification process was much more difficult and much slower than expected, in part due to both groups' divergent concepts of the ideal Germany.

Indeed, intergroup conflict often consists in a disagreement between groups about their relative position within a given social structure, and conflict often starts where power and status differences are perceived to be unjustified and/or no longer stable but subject to change (Tajfel, 1978, 1982; Tajfel & Turner, 1979; Turner, 1999). In our example, the unification process indoubtedly implied change for both groups. Where the West Germans struggled to

defend their superior position perceived to be at stake, the East Germans were frustrated with their inferior position and attempted to reach more equal status.

The present research will target intergroup relationships of unequal status, power, and numerical relations, i.e. between dominant majority and non-dominant minority groups, and focus on the role and consequences of group members' beliefs regarding both groups' standing in and claims for their shared superordinate group. Our studies all deal with intergroup relations between ethnic minorities and majorities. We claim that the investigated processes also hold more generally for intergroup relations characterized by structural inequality whereby we assume that the dimension underlying the disparities is power (see Dovidio, Gaertner, & Saguy, 2007, for a similar perspective). Noteably, however, we restrict our theoretical and empirical analyses to contexts in which the minority's goal (or necessity) is to *improve* their marginal position rather than entirely *reverse* the system (as was the case, for instance, in the revolutionary protests during the 'Arabic Spring' in 2011). In sum, whenever the terms 'majority' and 'minority' are used, they may serve as proxies to define structural differences between advantaged and disadvantaged groups in terms of social and political power, as well as social and economic resources, which often, but not always (e.g. Sachdev & Bourhis, 1991), go hand in hand with group status and prestige (e.g. Jetten, Spears, Hogg, & Manstead, 2000), to such an extent that the labels status, power, and advantage are often used interchangeably (Demoulin, Leyens, & Dovidio, 2009).

While the present research emphasizes the importance of superordinate group representations, our major aim is to show that explaning intergroup relations from disagreement over the superordinate group can involve two aspects. That is, subgroups can disagree by diverging with respect to their *own* perspectives, but conflict can also result from perceptions thought to be held *by the outgroup* (especially when these diverge from one's own perception). We believe that only considering group members' own perception of where in the superordinate group they stand relative to the outgroup is often not the whole story. Instead, how group members believe their outgroup to represent the relative positions should also be highly relevant if we want to reach a more complete understanding of intergroup processes (Bourhis, Moise, Perreault, & Senecal, 1997; Brown & Zagefka, 2011; Horenczyk, 1997; Piontkowski, Rohmann, & Florack, 2002). Using the above example, tensions between East and West Germans may not only result from the groups' divergent own perceptions of the West Germans' representativeness, but could further be rooted in the West Germans' belief that the East Germans don't accept the West Germans' superiority as well as in the

East Germans' conviction that the West Germans don't value the East Germans' contributions to the common superordinate group.

To summarize, we offer two explanations that together may prove valuable for a more complete understanding of the relationship between superordinate category representations and intergroup evaluations among both majority and minority members. First, following a social identity threat account, we will argue why the perceptions group members attribute to their outgroup, i.e. their meta-perceptions regarding the superordinate group are linked to intergroup evaluations, and why this may be more strongly so among minority than majority group members. Second, we will introduce minority members' identification pattern with their sub- and superordinate group as a potential moderator of the effects of own- and meta-perceptions of the superordinate group[1].

[1] When using the term 'meta-perception', we refer to the perception ingroup members attribute to their outgroup regarding the relative positions of ingroup and/or outgroup within the superordinate group. We will tend to use the terms 'meta', 'attributed', and 'perceived' interchangeably.

2 Theoretical Background

2.1 Superordinate group representations and intergroup relations

Social psychologists who examine the challenges faced by different subgroups who live together in the same shared society mainly do so from two different yet related theoretical perspectives. On the one hand, the ingroup projection model (IPM; Mummendey & Wenzel, 1999a) follows the tradition of self-categorization theory (SCT; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) to focus on the common superordinate group as a background which subgroups refer to when evaluating each other. On the other hand, acculturation researchers have described subgroup members' representation of the superordinate group in terms of interethnic ideologies – such as multiculturalism and assimilation – in order to explain intergroup tensions (e.g., Arends-Tóth & Vijver, 2003; Van Oudenhoven, Prins, & Buunk, 1998). Both perspectives will be described in the following before I attempt an integrative account of current research dealing with minorities' and majorities' divergent perspectives on their superordinate group. Thereby, we will identify research gaps some of which this dissertation aims to fill, theoretically and empirically.

2.1.1 Divergent perspectives part I: The ingroup projection model

How can different groups live together peacefully in diverse societies? Do they always cherish the variety of customs and lifestyles that different groups contribute to the larger whole? In short, is diversity always colorful and exciting? Reality suggests it is not. Categorization and identification processes and resulting (biased) representations of the shared group may explain why.

According to Tajfel (1981) in the same way that people use categories to structure information and make sense of their environment (e.g., Rosch, 1978), we also categorize ourselves into social categories in order to give meaning to the self. Turner (1987) proposed that self-categorization can occur at different levels of abstraction, with the individual self as the least inclusive category, social groups (e.g., artists, scientists) on the intermediate level, and all human beings at the superordinate and most inclusive level. As a consequence of categorization, similarities within and differences between social categories are emphasized, and the distinction between ingroup and outgroup becomes accentuated. Further,

depersonalization occurs such that group members will see themselves as essentially interchangeable with other members of their group.

What does this imply for how subgroups deal with each other given that they are all included in a common superordinate group – such as groups of different cultural and ethnic background are within a nation? At first sight, as soon as members of subgroups re-categorize at the next more inclusive level, depersonalization should reduce or eliminate former subgroup differentiation and enhance the perception that, within the superordinate group, all members share a common identity (Gaertner & Dovidio, 2000), and are therefore to be treated equally (Wenzel, 2000).

However, representing the common superordinate group as one in which all members are interchangeable may not always be that easy. Though being identified with the superordinate group, group members may still remain highly attached to their subgroup, and trying to reduce its salience can rebound (Hornsey & Hogg, 2000) and hinder positive effects on intergroup relations (Brown & Hewstone, 2005; Gonzalez & Brown, 2006). Thus, superordinate categories are not always and not only conceived of in terms of a 'common identity' that is beneficial to the evaluation of former outgroups. Instead, Turner's analysis also points out that superordinate groups serve as background that provides subgroup members with the relevant dimensions of comparisons they refer to when evaluating relevant outgroups (i.e. other subgroups who are also included into the superordinate one). Social identity theory (SIT; Tajfel & Turner, 1986) informs us that comparison dimensions become important to the extent that individuals identify with a group, because the ingroup's valence, entitlement, and status is evaluated by means of social comparisons with relevant outgroups. In short, group members derive the value of their ingroup, relative to that of the outgroup, by referring to the superordinate level. Following Rosch (1978), they refer to the category's core characteristics, represented by its prototype, which serves as anchoring or reference point for the perception and evaluation of its members, i.e. of other subgroups in the case of superordinate groups.

Turner's (1987) hypothesis that the evaluation of ingroup and outgroup depends on their relative comparison with regard to the prototype of the (positively valued) superordinate group is the core argument of the ingroup projection model (IPM; Mummendey & Wenzel, 1999; Wenzel, Mummendey, & Waldzus, 2007). Following SCT, the superordinate group serves as a reference frame which in the form of its prototype provides the norms and standards against which the subgroups are evaluated. Thus, the relative position of ingroup

and outgroup with respect to the superordinate prototype or, in other words, the extent to which the groups are perceived to conform to the norms and values of the shared group, determines the quality of the intergroup relation. Thus, the model proposes that ingroup and outgroup are positively evaluated to the extent that they are perceived to be prototypical. Greater relative prototypicality of the ingroup justifies higher status, as well as greater entitlement to the resources of and the privileges associated with the superordinate group.

However, the IPM further posits that perceptions of relative prototypicality are biased in favor of the ingroup: As group members strive for positive distinctiveness of their group, they will generally tend to view their group as being *more* relatively prototypical for the superordinate group compared with the outgroup. In other words, group members are inclined to project the attributes of their subgroup to the superordinate group, and thereby define the superordinate prototype more in terms of the ingroup than the outgroup, i.e. they engage in ingroup projection. As such, the social construction of the superordinate group is inherently subjective in the sense that it is shaped by one's subgroup membership. One important corollary of ingroup projection is that subgroups will generally disagree about their groups' relative prototypicality for the superordinate group because both groups will exaggerate their ingroups' relative prototypicality. As Kessler and Mummendey (2009) have described in detail, these resulting divergent perspectives can be a source of intergroup misunderstanding, or dissent and conflict, especially when the divergent perceptions turn out to be incompatible or even insurmountable (e.g. Sherif, 1965). I will return to a more detailed discussion of the relevance and consequences of ingroup-favoring biases later when I turn to group member's subjective perception of divergent perspectives.

In support of the IPM's tenets, a substantial body of research has shown that subgroups objectively diverge in their superordinate category representations (Imhoff, Dotsch, Bianchi, Banse, & Wigboldus, 2011; Waldzus et al., 2004; Wenzel, Mummendey, Weber, & Waldzus, 2003), especially when dual identification with both the subgroup and the superordinate group is strong (e.g., Wenzel et al., 2003). These studies show that some subgroups are inclined to project the ingroup's attributes to such an extent that the subgroup is confounded with the superordinate group; they consider their subgroup as *pars-pro-toto*, as a part that stands for the whole (Wenzel et al., 2003; see also Waldzus, 2010). Importantly, however, all of the mentioned studies have found this strong overlap in the definition of sub- and superordinate group among equal or high status (and power) groups only, while low status and minority groups are much less likely to set the dominant group equal with the

superordinate group to the same extent as dominant group members do (Huynh, Devos, & Altman, 2012; Devos, Gavin, & Quintana, 2010; Devos & Banaji, 2005; Waldzus et al., 2004). In many real-world cases, language exemplifies the pars-pro-toto tendency, and is also prone to accentuate it. For example, the ethnic majority subgroup in Germany is labeled 'Germans', but a 'German' is theoretically also each and every person who holds the German citizenship. As such, the use of identical terms for the majority subgroup and the superordinate group neglects the existence of substantial ethnic minorities within Germany (see also the American = White effect; Devos & Banaji, 2005).

Given that high status or majority groups define the superordinate group essentially in terms of their subgroup, the question arises of whether this perception of reality is reciprocated by subordinate or minority groups. From the perspective of the IPM, though ingroup projection may also operate in minority groups, reality strongly constrains it: Their lower status, power, and mostly also number should make them less prone to assimilating the attributes of the ingroup to the superordinate group. In this respect, for example, Waldzus and colleagues (2004, Study 3) found that while East and West Germans agreed about the degree to which East Germans were prototypical for Germans, East German participants perceived much lower prototypicality of West Germans than West German participants did. Thus, the subgroups' disagreement about the West but not the East Germans' prototypicality speaks to the assumption that high status or majority groups are more prone to perceive their subgroup as standing for the superordinate whole. Interestingly, as both groups agreed on the East Germans' prototypicality, there was no sign of ingroup projection among the lower status East Germans. Possibly then, ingroup projection may be stronger for majority than minority groups.

Notably, disagreement over the superordinate category as shown within the IPM (Waldzus et al., 2004) is similarly illustrated in other research showing that majority members prefer a one-group representation of the shared group, while minority members opt for a dual identity representation (Dovidio et al., 2007; Saguy, Dovidio, & Pratto, 2008). This evidence also converges with the notion that assimilation versus multiculturalism are the preferred acculturation strategies among majority versus minority members, respectively (Arends-Toth & Van De Vijver, 2003; Van Oudenhoven et al., 1998; Verkuyten, 2005a, 2006), which I will elaborate on in the next section.

With respect to the model's tenet that relative prototypicality predicts the quality of intergroup relations, research on the IPM has convincingly confirmed that greater relative

ingroup prototypicality leads to less positive intergroup attitudes, group-based emotions, and behavioral intentions (for a review, see Kessler et al., 2010; Wenzel et al., 2007), and that high dual identification fuels these links (e.g., Waldzus, Mummendey, Wenzel, & Weber, 2003). However, important for the present research, this pattern only holds for equal or high status groups. Conversely, relative prototypicality and its effects on intergroup attitudes are clearly under-investigated for low status or minority groups. Notably, the most recent review by Wenzel et al. (2007) contains no study that tested this relationship specifically within minority groups. Moreover, in the few studies that do include minorities, the effects appear to be much stronger for high status groups or majorities than low status groups or minorities (Devos & Huynh, 2011; Mummendey & Kessler, 2008; Weber et al., 2002). For example, in a large survey study across three countries, relative ingroup prototypicality was a much stronger predictor of intergroup attitudes and prejudice for the countries' ethnic majorities relative to their immigrant minorities (Mummendey & Kessler, 2008).

In sum then, IPM research has established that minority and majority groups often diverge in their superordinate category representations, and that greater relative prototypicality is related to less positive intergroup evaluations. Yet to date, when and to which extent perceptions of relative prototypicality are relevant predictors of intergroup evaluations not only for majority but also for minority members, remains unclear. The present work aims to address this limitation by providing a theoretical framework and related empirical evidence that accounts for the apparently different ways in which majority and minority members use their superordinate category as evaluative background. Moreover, while the IPM primarily focuses on superordinate category representations as determinants of intergroup relations, it has given less empirical attention to the implications of divergent perspectives both between and within groups of unequal status and power. This has been the focus of recent advances within acculturation orientation frameworks of which we will give a more detailed overview in the following.

2.1.2 Divergent perspectives part II: Acculturation models

How do we deal with changing societies? How are newcomers received, and how can and do they adapt best? But also: how does the receiving society adapt to change initiated by the mere presence of migrants? How do both sides envision their larger society to be or to

become? What would be the best way to avoid intergroup conflict and achieve intergroup tolerance or even harmony?

Acculturation researchers have long been studying the processes in reaction to inter-cultural contact between members of host societies and immigrants. Since the first psychological theories on acculturation in the beginning of the past century, a broad array of taxonomies has been developed and revised (Rudmin, 2006). Essentially, however, in all of the theoretical accounts, the issue of acculturation centers around two questions: (1) Should immigrants maintain their heritage culture and identity? and (2) Should intergroup contact be sought? / Should the dominant culture be adopted? (Berry, 1980, 1997, 2001; Bourhis et al., 1997). Berry classified responses to these questions into four categories depicted in the left part of Figure 1, representing the four acculturation strategies[2] of *integration* (high on both cultural maintenance and contact), assimilation (low on maintenance, high on contact), separation (high on maintenance, low on contact), and marginalisation (low on both maintenance and contact). Bourhis and colleagues (Bourhis et al., 1997) suggested to change the contact dimension into a 'cultural adoption' dimension so that the two dimensions of maintenance and adoption both assess orientations towards the values of each culture. Moreover, rather than classifying group members into one of the four categories (Berry, 1997), other researchers have treated the two issues of cultural maintenance and adoption as two separate dimensions (e.g., Geschke, Mummendey, Kessler, & Funke, 2010; Zagefka & Brown, 2002).

Originally, acculturation research focused on the immigrant rather than the host side, and generally suggests that immigrants who pursue an integration strategy have the best adaptation outcomes, assimilation and separation strategies are moderately adaptive, while marginalization is least adaptive (Berry, 1997). Similarly, conceptualizing acculturation as identification, biculturalism, i.e. dual identification with both cultures, has been shown to be positively related to psychosocial adjustment (Berry, 2006; Hutnik, 1991; Nguyen & Benet-Martínez, 2012). Notably however, the societal context is crucial in determining which of the four strategies or preferences is most adaptive (Berry, 1997, 2008). Put differently, adaptive outcomes are not independent on the prevailing climate of the larger society. For example,

[2] Please note that next to acculturation 'strategies', other terms have been used in the literature, such as 'orientations' and 'goals'. We will also tend to use these terms interchangeably, and differentiate between acculturation preferences and acculturation demands in Study 3.

strong dual identification may be maladaptive in contexts where the dominant majority pushes forward assimilationist ideologies (Baysu, Phalet, & Brown, 2011).

Accordingly, acculturation research increasingly incorporates the fact that acculturation is a dynamic process in which members of the receiving society and immigrants are equally involved. In this respect, Berry (2001) extended the terminology of acculturation strategies to the larger society, illustrated in the right part of Figure 1, thereby emphasizing the relevance of taking into account both perspectives. Relatedly, Bourhis and colleagues (1997) presented their interactive acculturation model (IAM) in which host and immigrant acculturation orientations are pitted against each other to form relational outcomes that can be consensual, problematic, or conflictual. These outcomes depend on whether both groups agree on the respective acculturation strategies, i.e. whether and how their answers to the two questions stated above converge. Going one step further, the IAM has further been extended to take into account group members' subjective conception of whether majority and minority agree on their acculturation strategies (Piontkowski et al., 2002). Related evidence indicates that subjectively perceived as well as experimentally induced divergence in acculturation orientations (cultural discordance) is related to increased realistic and symbolic threat, as well as less positive intergroup relations, among both receiving society and immigrant group members (Piontkowski, Rohmann, & Florack, 2002; Rohmann, Florack, & Piontkowski, 2006; Rohmann, Piontkowski, & van Randenborgh, 2008; Zagefka & Brown, 2002). As such, not only the objective acculturation 'fit' between majority and minority group defines how conflictual or harmonious the intergroup relation is. These studies allow to additionally suggest that the *subjective* fit perceived by group members is also decisive in determining their perception of the intergroup relation. However, Piontkowski and her colleagues did not disentangle the potentially differential impact of the two components that define subjective convergence, namely group members' own preference and the preference attributed to the outgroup. Which of the two drives the effects on perceived threat? Very recently, Brown and his research group have given this issue some considerable attention (for an overview, see Brown & Zagefka, 2011; Tip, Zagefka, González, Brown, Cinnirella, & Na, 2012; Zagefka, Brown, Broquard, & Martin, 2007), but before elaborating on the role of group members' own perspective versus the one attributed to the outgroup in more detail below, we would like to point out some striking parallels between as well as complementing insights of the IPM and acculturation models.

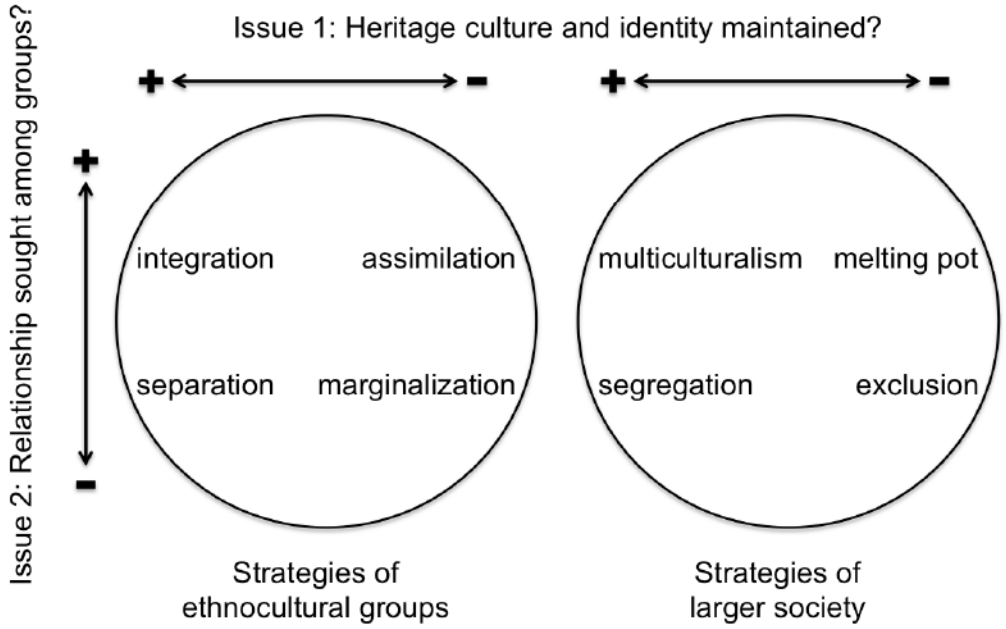

Figure 1: Acculturation strategies in immigrants and the receiving society. Adapted from Berry (2001).

2.1.3 Ingroup projection and acculturation orientations: an integrative account

What the IPM and acculturation frameworks share is their focus on how subgroups differentially represent their common superordinate group, and on the resulting consequences for their intergroup relations (see also Correll, Park, & Smith, 2008). Convergent with IPM findings, studies on acculturation orientations similarly suggest that high-status or majority members and low-status or minority members have very different representations of their superordinate group. Specifically, acculturation researchers have convincingly demonstrated that dominant majorities typically prefer assimilation, i.e. wanting immigrants to adopt the dominant culture, while non-dominant minorities prefer multiculturalism, expressed by (also) wanting to maintain their culture of origin (Arends-Tóth & Vijver, 2003; Ryan, Casas, & Thompson, 2010; Verkuyten, 2005a; Wolsko, Park, & Judd, 2006; Zárate & Shaw, 2010). Translated into the terminology of the IPM, majorities prefer high relative prototypicality of their ingroup, while minorities emphasize that their ingroup be (perceived as) prototypical (see Mummendey & Kessler, 2008; Verkuyten, 2011). This is also convergent with the proposition that ethnic minorities generally prefer a dual-identity representation, while majorities show preference for a one-group representation (Dovidio, Gaertner, & Saguy, 2009; Dovidio et al., 2007), illustrated in Figure 2.

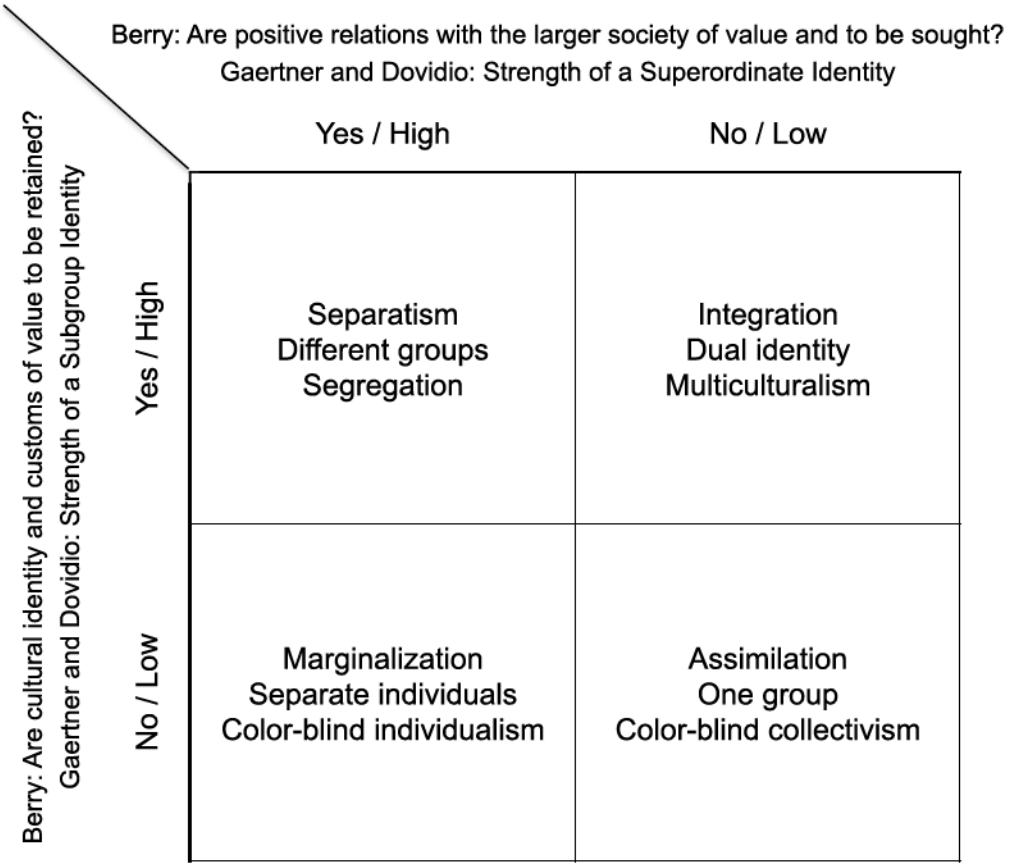

Figure 2: Relation between Berry's acculturation model and the common ingroup identity model (source: Dovidio et al., 2009).

Inasmuch as the IPM is geared towards a majority perspective, so has acculturation research traditionally targeted minorities. To exemplify, while relative ingroup prototypicality is often perceived as granted by majorities, it is (with the exception of revolutionary attempts to *reverse* the existing order) something almost unachievable for minorities. On the other hand, it seems a rather intuitive question to ask minority members how much they want to adopt the majority's culture, but framing this question for majority members is much less self-evident (but see Geschke et al., 2010, for a notable exception). Despite these different foci, evidence within the IPM and acculturation research should largely complement each other.

As outlined above, the IPM – but also other accounts of the importance of superordinate categories, such as the common ingroup identity model (CIIM; Gaertner & Dovidio, 2000; Gaertner, Dovidio, Anastasio, Bachman, & Rust, 1993) – has generated much knowledge regarding how high status, advantaged, or majority groups represent their superordinate group and how these representations are related to relevant intergroup outcomes such as

intergroup evaluations, prejudice, group-based emotions, and behavioral intentions. At the same time, those studies that have investigated the effects of relative prototypicality among minority members have found them to be weak to absent (e.g. Huynh, Devos, & Altman, 2012; Mummendey & Kessler, 2008).

Conversely, within the acculturation frameworks, most studies focus predominantly on ethnic minority members, and little research has attempted to relate acculturation orientations to intergroup variables other than individual-focused outcomes such as psychological and sociocultural adaptation (e.g., Chun, Ball Organista, & Marín, 2003; see Brown & Zagefka, 2011, for the most recent critique). In other words, evidence regarding intergroup-focused correlates of acculturation orientations is still scarce, and has concentrated on majority groups (Geschke et al., 2010; Piontkowski et al., 2002; Zagefka et al., 2007; Zagefka, Brown, & González, 2009).

Yet, especially in light of evidence from the IPM and other models dealing with the role of superordinate group representations, it is far from unreasonable to assume that both preference for the dominant group's culture (cultural adoption) as well as being able to retain important aspects of one's social identity (cultural maintenance) are related to intergroup attitudes and prejudice. A few studies support this claim by showing that a preference for integration was related to more positive perceptions of the intergroup relation among both majority and minority members (Zagefka & Brown, 2002; see also Zick et al, 2001). From a slightly different but related angle, other studies have investigated the relationship between superordinate group representations and intergroup relations in terms of multiculturalism versus assimilation ideologies (e.g., Ryan et al., 2010; Verkuyten, 2005; Wolsko et al., 2006; Zárate & Shaw, 2010). For example, Verkuyten (2011) recently found that an assimilation orientation predicted more negative outgroup attitudes among majority members, especially when they were highly identified with their ingroup. Further, using an experimental approach, inducing multiculturalism has been shown to have beneficial effects in White majority members (Richeson & Nussbaum, 2004; Vorauer, Gagnon, & Sasaki, 2009; Wolsko, Park, Judd, & Wittenbrink, 2000).

Thus, there is substantial indication that among high status or majority groups both higher relative prototypicality and stronger preference for assimilation (i.e. more cultural adoption than maintenance) are related to negative outcomes such as less positive outgroup evaluations, threat, and prejudice. At the same time, there are at most a handful of studies (Piontkowski, Florack, Hoelker, & Obdrzálek, 2000; Zagefka et al., 2007, 2009; Zagefka &

Brown, 2002; Zick, Wagner, van Dick, & Petzel, 2001) that have shown a link between acculturation orientations and intergroup relations among (ethnic) minority members. One aim of the present research is to contribute to this extension and complementation of the IPM and the acculturation frameworks.

2.2 Divergent social realities: Advantaged and disadvantaged groups

2.2.1 Different worlds

The main aim of the present research is to more fully understand the role of superordinate group representations in both sides of an intergroup relation characterized by social inequality. Because advantaged and disadvantaged groups frequently experience divergent social realities, it seems even more crucial to map both perspectives in order to get a fuller account of the potential dimensions of conflict (Demoulin, Leyens, & Dovidio, 2009; Esses, Deaux, Lalonde, & Brown, 2010; Wright & Lubensky, 2009)

Superordinate groups are of common (and competitive) interest to both majority and minority subgroups. Therefore, if we want to understand the dynamic nature involved in the formation, defense, and shaping of their norms and values, we need to consider not only both subgroups' own perceptions and preferences, but also what they perceive the respective other group to think and want, as well as how both perspectives mutually influence each other (Brown & Zagefka, 2011). In this sense, our research follows up on and more closely inspects the emphasis on *relational* aspects of intergroup relations already made by social identity theorists Tajfel and Turner (1986). In the following, we will argue why group members' perceived outgroup perspective can be conceptualized as a social identity threat that therefore negatively affects the intergroup relations, and how such threat is both different between and differentially relevant for minority and majority members.

Critical for the development of this argument is the consensual view that advantaged and disadvantaged groups live in different social worlds. Disparities in power, prestige, and access to important resources appear to be at the core of the two groups' differential experience (Saguy, Pratto, Dovidio, & Nadler, 2009; Saguy et al., 2008) substantially affecting group members' everyday life and the psychological processes that guide their cognitions, emotions, goals and behaviors. Recent studies show that advantaged and disadvantaged group members diverge in their communication focus (Saguy et al., 2008), interaction goals (Bergsieker, Shelton, & Richeson, 2010), socio-emotional needs (Siem, von

Oettingen, Mummendy, & Nadler, 2012), and in their evaluative concerns (Shelton, 2003; Vorauer, 2006).

Different ideologies held by advantaged and disadvantaged groups are likely to foster this social structure: members of dominant groups typically endorse and legitimize group-based hierarchy more than members of subordinate groups, and subordinate groups perceive discrimination to a greater extent than dominant groups (Pratto, Sidanius, Stallworth, & Malle, 1994; Sidanius & Pratto, 2001). This implies that in a particular social, political, and historical context where dominant majorities consider the unequal status relations justified, subordinate minorities are likely to perceive them as relatively more illegitimate and more resistant to change (Verkuyten & Reijerse, 2008). For example, Blacks perceive discrimination to be pervasive and are highly concerned to become the target of prejudice, while Whites tend to de-emphasize existing race-based discrimination and emphasize perceptions that the world is just and fair (Jones, Engelman, Turner, & Campbell, 2009; Monteith & Spicer, 2000). Furthermore, we have detailed above that in immigration settings, majority groups generally think and act according to an assimilationist ideology, which stands in opposition to minorities favoring multiculturalism (Arends-Toth & Van De Vijver, 2003; Van Oudenhoven et al., 1998; Verkuyten, 2005a, 2006).

Put in the words of social identity theory (Tajfel & Turner, 1986; see also Blumer, 1958; Bobo, 1999), when the social structure is perceived to be insecure (i.e., illegitimate and/or unstable), advantaged groups are strongly motivated to maintain or defend their superior status quo, while disadvantaged groups strive to change the social structure in order to improve their status and achieve a positive social identity. To summarize, these divergent social realities of advantaged and disadvantaged groups not only bear the consequence of pervasive and persistent social inequality and intergroup tensions, but also account for the differential orientations, goals and motivations when it comes to defining, preserving or changing their intergroup relation.

2.2.2 Differently tuned: A social power account

From the perspective of social power research, the most important characteristic of asymmetrical power relations, such as between advantaged and disadvantaged groups, is the outcome dependency of the disadvantaged or powerless. Those endowed with power reside over the resources that the powerless are deprived of, thereby controlling their outcomes

(Fiske, 1993; Keltner, Gruenfeld, & Anderson, 2003; see Simon & Oakes, 2006, and Turner, 2005, for more differentiated social psychological accounts of social power and its causal relation to influence and resource control). As a result, high and low power groups substantially differ in a variety of psychological processes, mainly concerning their attentional focus.

Specifically, due to their dependency on the advantaged and more powerful majority, disadvantaged or powerless minority groups have to pay much more attention to the actions of their more powerful majority outgroup (Devine, Evett, & Vasquez-Suson, 1996), they are more likely to scan their environment for relevant information (Fiske, 1993; Fiske & Dépret, 1996; Keltner et al., 2003), rather than selectively focus on the primary information at hand (Guinote, 2007, 2008), and to take their outgroup's perspective (Galinsky, Gruenfeld, & Magee, 2003; Galinsky, Magee, Inesi, & Gruenfeld, 2006; Keltner et al., 2003; Lammers, Galinsky, Gordijn, & Otten, 2008; Sassenberg, Jonas, Shah, & Brazy, 2007). Low power groups' attentional focus on the more powerful outgroup further leads them to be more aware of their outgroup's stereotypes (Crocker, Major, & Steele, 1998; Krueger, 1996), but also to activate and apply the stereotypes believed to be held by the outgroup more (Lammers, Gordijn, & Otten, 2008). This greater awareness of the high power or majority's representations also results in greater accuracy regarding the majority's actual perceptions (e.g. (Crocker & Major, 1989). For example, in a study by Zagefka and Brown (2002), whereas immigrants were quite accurate in their perceptions of the receiving society's acculturation preference, host society members were not.

In sum, approaching majority-minority relations from a social power account suggests that low status and power groups such as ethnic minorities are more outgroup-focused and therefore more inclined than the dominant majority to be 'attuned' to their outgroup's perspective. In contrast, routinely taking a more egocentric stance (Galinsky et al., 2006), powerful and dominant groups such as most ethnic majorities should mainly focus on and be guided by their own perspective, ignorant of or unaffected by the minority's position. Thus, the social power approach suggests that powerless minorities are not only more aware of what their outgroup thinks, but they also know that what the powerful majority thinks and does counts. They know that their inferior position within the larger society is mainly determined by the more powerful majority who are the ones residing over the society's norms and standards.

2.2.3 Differently threatened: A social identity account

One important implication of the social power account is that the minority's awareness of and dependency on their outgroup's perspective can be one potent if not constant source of threat to their ingroup: In the extreme case, the majority can have the power to rule over the very existence of the minority. It further suggests that such threat should generally not be present among the more ingroup-focused majorities, as the outgroup's perspective is proposed to be rather irrelevant. Yet, as we will see, there is good reason to assume that this is not the whole story. Indeed, the idea that the outgroup can threaten group members' social identity independent of power or status can be traced back to the origins of SIT (Tajfel, 1978; Tajfel & Turner, 1986), and has recently received some considerable attention in theory and research on social identity threat (Shelton, Richeson, & Vorauer, 2006). This theoretical line is central to the development of our hypotheses and will be discussed next, along with an overview of intergroup research on meta-perceptions, or the subjective belief regarding what the outgroup thinks about one's ingroup.

An early attempt in intergroup research to show that the outgroup's perspective matters is reported by Brown and Ross (1982), who emphasized the dynamic nature of intergroup relations at a time when social identity theory had just gained ground. Brown and Ross manipulated responses from the outgroup to the outcome of an intergroup comparison on a bogus reasoning test. Outgroup responses either challenged or confirmed the (illegitimately acquired) higher status of the group that had unfairly obtained the better test outcome. Thus, while the challenge message (a statement that the low status group is just as good on the relevant dimension of comparison as the high status group) was operationalized as a high (low) threat to high (low) status group, a confirmation of the status differences (a statement that the high status group is better at reasoning than the low status group) posed a high (low) threat to the low (high) status group. In the high threat condition, high status group members consequently perceived the test as *less* unfair than before they had learned what their outgroup thought, and the reverse was true for the low status group who perceived *more* unfairness. High threat also affected other intergroup outcomes, such as ingroup bias and feelings of annoyance toward the outgroup. Thus, "merely learning what another group *thinks of your own group* can (…) have important consequences for the way the two groups are later viewed" (Brown & Ross, 1982, p.175, italics added).

Interestingly, none of the existing accounts regarding how the perceived outgroup perspective affects an intergroup relation has explicitly referred to this experiment by Brown

and Ross. Yet, we believe it is crucial to acknowledge when studying intergroup meta-perceptions, because it adheres to two main ideas: First, the design takes into account the perspectives of and effects on *both* groups, rather than investigating one group in isolation (for a similar perspective, see Demoulin et al., 2009). Second, the outgroup's perspective is conceptualized in terms of a potential *threat* to the groups' status, and, thereby, to their social identity.

Social identity as defined by SIT (Tajfel & Turner, 1979) is that part of the self-concept that individuals derive from their membership in a social group. Out of their motivation to evaluate themselves positively, people strive to maintain a positive social identity, which depends on favorable social comparisons with relevant outgroups on valued dimensions and is achieved when positive distinctiveness relative to other groups is established. Thus, social categories not only provide orientation by simplifying the social world, but they also give meaning to the social self through relevant comparisons of the ingroup with relevant outgroups.

But a positive social identity is not guaranteed. Instead, whenever subordinate groups question the status hierarchy or dominant groups perceive their superior position to be at stake, groups are confronted with negative comparison outcomes that threaten their social identity (Tajfel, 1974; Tajfel & Turner, 1986). With SIT focusing on disadvantaged groups who are more vulnerable to social identity threats due to their inferior position, it proposes that members of subordinate groups will subsequently engage in identity management strategies either aimed at leaving the group or at making it more positively distinct (Ellemers, 1993; Hirschman, 1970; Mummendey, Kessler, Klink, & Mielke, 1999; Mummendey, Klink, Mielke, Wenzel, & Blanz, 1999; Tajfel, 1976). Thus, SIT reasons that intergroup conflict and discrimination can be explained by threatened social identities that motivate the subordinate group to develop a positive group identity which is often incompatible with or hindered by the dominant groups' desire to maintain and defend the status quo. Important for the present intergroup context is that the striving for distinctiveness may often be conceived of as the only way for ethnic minorities not to be assimilated by the larger majority – and thereby give up their existence. Notably, whether members of disadvantaged groups chose to restore their negative identity through individual mobility strategies or more collective strategies such as social competition not only depends on the social structure of the intergroup situation (Ellemers, 1993; Hogg & Abrams, 1988; Tajfel, 1974; Tajfel & Turner, 1986), but on how strongly they are attached to their ingroup (Branscombe & Ellemers, 1998; Ellemers, Spears,

& Doosje, 1997). We will come back to the moderating influence of identification further below.

A comparative view of the social power and social identity accounts highlights that despite the similar underlying assumption of different psychologies between the advantaged and the disadvantaged, the predictions that can be derived with respect to the relevance of the outgroup's perspective diverge when it comes to dominant groups. The social power account suggests that they generally do not consider what their inferior counterparts think and want. Conversely, SIT puts forward that the powerful are highly likely to be threatened and affected by an outgroup who is perceived to threaten their status position. One way to reconcile both accounts is to reconsider that SIT also predicts low threat perceptions when the structure of the intergroup relation is perceived to be secure, i.e. both legitimate and stable (Tajfel, 1974; Tajfel & Turner, 1986) – and secure power is indirectly implied in the conceptualization of the powerful as those who do not *need to* attend to the powerless (Fiske, 1993). In this regard, power has been shown to lead to power-congruent actions (approach) only when participants had legitimately been in a powerful position, but to avoidance when their power was illegitimate (Lammers, Galinsky, et al., 2008). Thus, it seems that the social power account holds until high power groups perceive the hierarchy to be questioned. To reiterate the words of Brown and Ross (1982), merely making group members think about the perspective of their outgroup may be sufficient to elicit perceptions of insecurity and thus threaten their social identity – in both low and high power groups.

In sum, a core distinction between advantaged and disadvantaged groups lies in the power-based threats they face when their relationship structure is perceived to be insecure: while minority members fear that their recognition is at stake, majority members are more concerned about their superior status quo (see also Dovidio et al., 2007). Important for the present research, the threats that both dominant and subordinate groups face are rooted in the perceived relation to the outgroup. Minority groups can perceive their distinctiveness to be threatened because they experience their position to be undermined *by the dominant majority*. Correspondingly, majority groups perceived their status to be threatened because they experience their position to be questioned or attacked *by the subordinate minority*. This is not to say that the threats are caused by the respective outgroup alone; the perceived insecurity of the social structure itself also contributes to the experience of a social identity threat, as can group members' own insight of a conflict between one's moral values and the way they are implemented (Tajfel & Turner, 1986; Turner, 1999). However, it is not unrealistic to assume

that the outgroup is often at least partly made responsible for the ingroup's position (in the case of subordinate groups) or the questioning of it (in the case of dominant groups).

This idea closely matches the conclusion by Brown and Ross: the outgroup's perspective can pose a potent threat to the ingroup's social identity, which in turn impacts on group members and the intergroup relation as a whole. When bringing together the various streams in intergroup relations research that have dealt with these issues, though their emphasis and foci may differ, their common underlying claim can already be summarized as follows: *How we believe an outgroup views and judges us based on our group membership (or social identity) matters, and it matters all the more if our ingroup is in a position of low status and/or low power.*

2.3 Meta-perceptions in intergroup relations

How do beliefs regarding what the outgroup thinks operate on the intergroup level, or, more precisely, how do meta-perceptions of the superordinate group impact on intergroup relations? How do ingroup members evaluate the belief that the outgroup perceives themselves (and not one's own ingroup) to be more relatively prototypical? Does it have negative or positive consequences to believe that the outgroup prefers integration over assimilation? Does that matter at all?

2.3.1 On the relational nature of meta-perceptions

We all know from everyday experience that what we believe others to think about us often truly matters and can at times keep our minds very busy. Indeed, that others' attitudes and behaviors have strong influence on the self, was early emphasized by symbolic interactionists, who went as far as to argue that the self is a product of how it is thought to be viewed by others (the 'looking-glass self', Cooley, 1902; Goffman, 1959; Mead, 1934; see also Shrauger & Schoeneman, 1979; Swann, 1987). However, the reverse relation can also hold, namely that people use their self-perceptions to determine how others view them (e.g. Kenny & DePaulo, 1993). In general, people seem to spend a lot of time with thoughts about the impression they convey to others (Baumeister, 1982; Sheldon & Johnson, 1993). If this is so, then what we believe others to think about us should impact on our relationships with those others. For example, Curtis and Miller (1986) experimentally showed that people's

meta-perceptions of how they are viewed by others influences their reactions towards them: participants who were lead to believe their interaction partner disliked them reciprocated the dislike (as indicated by less warmth and more distancing during the interaction, as well as lower ratings of liking the other), as opposed to participants who expected to be liked. Their study also showed that the targets' behaviors elicited reciprocal reactions by the perceivers, indicating that meta-perceptions of being disliked can initiate a negative spiral resulting in both perceived and actual discrimination. Similarly, on an intergroup level, Pinel (2002) could show that stigma consciousness or strong expectations to be negatively stereotyped (Pinel, 1999) was associated with more critical responses towards the interaction partner, who in turn also responded unfavorably. In short, meta-perceptions of how others see us seem to be a powerful steering device on the road towards either intergroup harmony or conflict.

Other related earlier intergroup research has dealt more generally with meta-perceptions in terms of evaluative biases attributed to outgroup members in an attempt to explain the phenomenon of intergroup bias (Brewer, 1979; Sumner, 1906; Tajfel, 1978). For example, Ng (1981) suggested that group members display ingroup favoritism as a preventive strategy in anticipation of discriminatory treatment by the outgroup: 'Because I expect that they won't treat us fairly, I will favor my group in the first place'. Indeed, Ng's (1981) experiment revealed that ingroup favoritism was especially pronounced when resource distribution was controlled not only by the ingroup, but also by the outgroup. In other words, intergroup bias was reduced only in the absence of seeing the ingroup's position to be threatened by anticipated discrimination from the outgroup. Relatedly, a study by Vivian and Berkowitz (Vivian & Berkowitz, 1993) indicates that expecting one's outgroup to be biased in their evaluation may indeed often be the default attribution, rather than thinking the outgroup has a positive or neutral perception. As such, control subjects exhibited the same amount of bias as participants who expected to be discriminated against, while only those who were lead to believe they were to be treated fairly demonstrated less intergroup bias (see also Diehl, 1989). Thus, it appears that group members reciprocate anticipated bias by responding in kind – independent of whether or not the outgroup actually behaves in a biased way.

This evidence demonstrates the powerful role that attributions or meta-perceptions alone can take: Due to underestimation of positive and overestimation of negative aspects or differences (Robbins & Krueger, 2005), or more generally the perception that the outgroup is biased (Judd, Park, Yzerbyt, Gordijn, & Muller, 2005; Pronin, 2007; Yzerbyt, Muller, & Judd, 2009), objective disagreement over the superordinate group may be subjectively

misconstructed and exaggerated. For example, two groups may mutually agree that one group has superior status over the other. Yet, the extent of the status difference may be underestimated by the high-status group and overestimated by the low-status group, resulting in perspective divergence, and potentially in misunderstanding or even overt intergroup conflict (Kessler & Mummendey, 2009; Robinson, Keltner, Ward, & Ross, 1995; Robinson & Kray, 2001).

In recent years, several theoretical approaches have significantly contributed to the knowledge of how and when meta-perceptions operate in intergroup contexts. Despite approaching the issue from different backgrounds, what all have in common is the notion rooted in social identity theory (Tajfel & Turner, 1986) that outgroups can pose a significant threat to one's social identity. To date, the different approaches have accumulated evidence largely independent of each other. For this reason, the following section provides an integrative overview of the most important streams of intergroup research broadly dealing with meta-perceptions at the subgroup level, aimed to subesquently inform the most central issue of this dissertation: the role of meta-perceptions at the superordinate group level.

2.3.2 Meta-perceptions as social identity threat

External categorization

Falling under the perhaps broadest definition of meta-perceptions, feeling or being categorized by others alone can constitute a source for positive or negative group-based expectations that consequently impact on the social self and the intergroup relation (Ellemers & Barreto, 2006). In this line, Ellemers and Barreto showed that people who reflected upon a situation in which they had been negatively categorized expressed higher levels of hostility and anxiety (see also Butz & Plant, 2006), but they also engaged in more active coping and showed higher levels of self-confidence than when positively categorized. Further, expecting to be categorized on the basis of group membership can also lead to less trust and acceptance in cross-group interactions, and this effect appears to be more pronounced among ethnic minority than majority members (Tropp, Stout, Boatswain, Wright, & Pettigrew, 2006). Potentially, the act of being categorized goes hand in hand with the perception that one will be judged on the basis of one's group membership believed to be negatively valued in the eyes of the other.

Meta-stereotypes in intergroup interactions

More direct evidence that, independent from the outgroup's actual view, group members' own belief structures regarding how the outgroup perceives them comes from research on meta-stereotypes or beliefs regarding the stereotypes held by the outgroup about one's ingroup (Vorauer, Hunter, Main, & Roy, 2000; Vorauer, Main, & O'Connell, 1998). Though meta-stereotypes can also be positive (e.g. Hollbach, 2005), they are mostly negative (e.g., Frey & Tropp, 2006) and have been shown to negatively affect outcomes such as intergroup contact intentions and outgroup evaluations (Gómez, Huici, & Morales, 2004; Hollbach, 2005; Judd et al., 2005; Vorauer & Kumhyr, 2001; Vorauer et al., 2000, 1998), and to lead to more negative emotions (Hollbach, 2005; Gómez & Huici, 2004). Moreover, though negative meta-stereotypes can decrease self esteem (Vorauer et al., 1998), group members can also react strategically to refute and disconfirm negative meta-stereotypes (Klein & Azzi, 2001). For example, Scottish participants helped the outgroup more after reflecting on being perceived as mean by the English (Hopkins, Reicher, Harrison, Cassidy, Bull, & Levine, 2007). Together, this stream of research demonstrates that beliefs about how one is perceived by an outgroup interaction partner are frequently activated in intergroup interactions (Vorauer & Sasaki, 2009; Vorauer et al., 2000, 1998), and thereby impact both on the self, as well as the quality and evaluation of the intergroup interaction. Notably, evidence on meta-stereotypes is highly restricted to (simulated or expected) intergroup interactions, and has received very little attention outside of interaction settings between an ingroup and an outgroup member, mostly ethnic minority and majority members (but see Hollbach, 2005; Hopkins et al., 2007). As one notable exception, both because of the different intergroup setting and because a complete design with both groups involved was employed, Hollbach (2005) manipulated the valence of West Germans' and East Germans' meta-stereotypes to find that, compared with the higher status West Germans, the lower status East Germans reacted more strongly to negative meta-stereotype information. In a related vein, Lammers and colleagues (Lammers, Gordijn, et al., 2008) could show that powerless participants attended more to meta-stereotypes than those put in a powerful position. Both studies can be seen as initial evidence that meta-perceptions are indeed more influential in the less powerful (or lower status) group.

Stereotype threat

From a different theoretical viewpoint, the stereotype threat literature similarly informs us that being evaluated and judged by others is important because it impacts on one's intellectual performance (see e.g., Inzlicht & Schmader, 2011; Maass & Cadinu, 2003; Steele, 1997; Steele & Aronson, 1995; Steele, James, & Barnett, 2002). For example, when induced to think a test is diagnostic of their intellectual abilities, women show lower math performance (Aronson, Quinn, & Spencer, 1998; Steele & Aronson, 1995), students with lower socio-economic status as well as ethnic minority members perform significantly worse (Croizet & Claire, 1998; Gonzales, Blanton, & Williams, 2002) The effects occur even when the negative stereotype is not explicitly mentioned; simply making the social category salient and awareness of the respective stereotype is enough to decrease performance. According to Schmader and colleagues (Schmader, Johns, & Forbes, 2008), stereotype threat effects occur whenever a situation poses a significant threat to one's self-integrity, and performance decreases due to physiological stress, active performance monitoring, and efforts to suppress negative thoughts.

The stereotype threat literature has mainly focused on intellectual performance measures as dependent variable, and is therefore limited in its generalizability to other variables qualifying intergroup relationships (for an exception, see Inzlicht & Kang, 2010). Moreover, the stereotype threat literature has a strong but likewise limited focus on the disadvantaged, women and ethnic minorities in particular. At the same time, it has been proposed and empirically demonstrated that a history of stigmatization is not necessary for stereotype threat to occur (e.g. Maass and Cadinu, 2003; Martiny, Roth, Jelenec, Steffens, & Croizet, 2012). Yet, a closer look at the moderators of stereotype threat effects that have been identified, namely factors such as stigma consciousness (Brown & Pinel, 2003), identification with the stereotyped domain (Aronson et al., 1999; Stone et al., 1999; see also Shapiro & Neuberg, 2007), or internal vs. external control beliefs (Cadinu, Maass, Lombardo, & Frigerio, 2006), does suggest that relative power and status may be an important underlying dimension of the mentioned moderators. The few studies that could show stereotype threat in typically powerful and high status groups (e.g., White men) have demonstrated the effects in contexts in which their comparison outcome with an outgroup was negative, putting them in the relatively lower status position: White men's performance was, for example, worse on math tasks when compared with Asian men (Aronson, Lustina, Good, Keough, Steele, & Brown, 1999), and on motor tasks when compared with Blacks (Stone, 2002). In short, we would like

to stress that, in line with the described accounts, the stereotype threat literature similarly hints towards the assumption that low power and status seem to increase the likelihood of experiencing and responding to a stereotype threat.

Perceived discrimination and social stigmata

Studies on perceived discrimination (Branscombe, Schmitt, & Harvey, 1999; Schmitt & Branscombe, 2002a) show that interpreting ambiguous outcomes (e.g. being the last person whose order is taken or being turned down on a date by a person of different ethnicity) to be based on prejudice is associated with reduced well-being and increased negative affect among disadvantaged group members. Research on stigma (e.g., Major & O'Brian, 2005; Crocker, Major, & Steele, 1998) and stigma consciousness (Pinel, 2002, 1999) similarly stresses that the predicaments of the stigmatized are their frequent experience of prejudice and discrimination combined with a high awareness of the negative connotations of their social identity. One way to cope with this threat of being rejected is, according to the rejection-identification hypothesis (Schmitt & Branscombe, 2002a), and in line with social identity theory (Tajfel & Turner, 1986), by buffering against the negative effects of perceived discrimination with increased ingroup identification (Schmitt, Branscombe, Kobrynowicz, & Owen, 2002; Schmitt & Branscombe, 2002a); see also Verkuyten, 2010). According to Schmitt and Branscombe (2002a), perceived discrimination entails quite different meanings for advantaged and disadvantaged groups, arguing that because the latter group's attributions to prejudice are more internally located, more stable, and less controllable, the perception of being discriminated against is more important and more harmful for them. On their account, "a pattern of stable attributions to prejudice reflects perceived systematic exclusion by the privileged group" (Schmitt & Branscombe, 2002a, p. 177), a painful experience that lacks comparability.

To summarize, even though the streams of research outlined above, i.e. research on external categorization, meta-stereotypes, stereotype threat, and perceived discrimination, take approaches from different angles and paradigms, they all have in common a focus on disadvantaged group members' experience of their outgroup's thoughts and actions as threatening to central aspects of their collective selves. At the same time, they barely focus on or make any predictions for those who seem to pose the threat, namely advantaged groups. In the following section, we will provide an overview of what we believe to be the most comprehensive and integrative account of when and why the outgroup's perspective poses a

threat to ingroup members' social identity, both for disadvantaged minority and advantaged majority groups.

2.3.3 Threatened social identities: An integrative account

The most explicit and integrative theoretical account of intergroup meta-perceptions as social identity threat has been put forward by Shelton and her colleagues (Shelton, Richeson, & Vorauer, 2006) who suggest that social identity threat functions as a more general principle that determines the likelihood of being affected by one's perceived outgroup perspective. According to Shelton and colleagues' (2006) model of social identity threat in interethnic interactions, the stereotypes believed to be held by outgroup interaction partners can become relevant to the extent that they threaten one's social identity, independent of group status or power (see also Stephan & Stephan, 1985; Vorauer, 2006). At the same time, the model specifies that what differs between majority and minority members is, along with the divergent social realities outlined above, the content of their meta-perceptions as well as the behaviors and coping strategies in response to the social identity threat. Moreover, the extent to which meta-perceptions negatively impact interethnic interactions is proposed to depend on attitudinal and situational factors that make group members vulnerable to social identity threats – with power or status being one such factor.

Shelton and colleagues' model may further help to integrate the different predictions of the social power and the social identity accounts. To recap, it has been argued based on SIT that minorities are more than majorities vulnerable to social identity threats in part because the threat to be left unrecognized, disrespected or even excluded by the outgroup is more existential and chronic, and therefore harder to deal with, than the potential of status loss (Schmitt & Branscombe, 2002b). The social power account converges on this assumption by emphasizing that low power minorities are more likely than high power majorities to attend to and be guided by their perceived outgroup perspective due to their higher dependency on the powerful. As such, when it comes to relevant dimensions of comparisons such as the superordinate group, we would predict that minorities' outgroup focus may lead them to be primarily influenced by the perception they believe their outgroup to hold, rather than or even not at all by their own perception. That for minorities, meta-perceptions are often more relevant than their ingroup perspective could in fact be one reason why minority members'

own perception of relative prototypicality is not or only weakly related to their intergroup attitudes (e.g., Huynh, et al., 2012).

Conversely, according to social power research, the powerful should per default attend to their own perceptions but not to their low power counterpart – at least when their power is perceived to be secured. Yet, once they do or are lead to take into account the minority's perspective, SIT predicts that they are likely to perceive or anticipate a threat to their status and power, with negative consequences being the result. What is more, some research suggests that their negative response will be even more pronounced than that of the minority (Riek, Mania, & Gaertner, 2006; Stephan et al., 2002). This evidence seems add odds with the social power account at first sight, but power differences may even help to explain these findings: high power groups who are used to having their position secured are likely to experience a threat to their position as both new and unexpected, which possibly initiates an even stronger counter-reaction. Taken together, majority members' own perception may be the default that most strongly predicts intergroup outcomes, in line with the social power account. However, following SIT and the model by Shelton and colleagues (2006), we also expect their meta-perceptions to influence intergroup evaluations as these pose a threat to their status quo.

To sum up, research on intergroup meta-perceptions so far shows that meta-perceptions often convey a threat to group members' social identity and thereby lead to detrimental effects on intergroup relations. While a variety of methods and operationalizations support this claim, its generalizability to settings other than intergroup interactions, specifically one-on-one (expected) interactions between ethnic minority and majority members, is to date rather limited.

The main shortcoming of the above accounts is that though focusing on a purely dynamic aspect, almost no studies employ full designs that simultaneously consider both groups and both perspectives within these groups. In fact, most research lines have a strong focus on disadvantaged groups, so that there is only limited evidence to support the threatening effect that meta-perceptions can have on majority members. More importantly, to our knowledge the present studies are the first to investigate own- and meta-perceptions of the superordinate group in ethnic minority and majority groups simultaneously, which will allow us to test our differential predictions by comparing their relative impact within and between both groups.

2.3.4 The relevance of superordinate group meta-perceptions

Having argued that meta-perceptions may be crucial to take into account to understand intergroup interactions, especially when it comes to ethnic minority groups, we propose that the influence of meta-perceptions investigated so far extends beyond intergroup comparisons on a subgroup level and also holds with respect to one's superordinate group. Accordingly, in the present research we examine the role of group members' perceived outgroup perspective regarding the subgroups' relative standing within the superordinate group. Next to group members' own representation of the superordinate category, we are interested in the impact of the respective perception attributed to the outgroup, i.e. their meta-perceptions of the superordinate group. As an example, the problem may not be that minority members themselves perceive the majority be relatively more prototypical, but that they think the majority does not perceive the minority to be prototypical or representative enough for the common larger group. On the other hand, believing that the outgroup perceives the ingroup to represent the norms and values of the superordinate group may play a crucial role in predicting more positive intergroup outcomes. This illustrates that meta-perceptions of the superordinate category may help uncover sources of conflict as well as avenues for more positive intergroup relations that cannot be uncovered by group members' own perceptions alone.

In this vein, within the IPM, Wenzel and colleagues (2008) already speculated that 'perceived outgroup projection' – i.e. believing that the outgroup claims more of the superordinate group to be represented by their own attributes – can be a source of threat, and therefore result in discriminatory attitudes (see also Esses, Dovidio, Jackson, & Armstrong, 2002; Stephan & Stephan, 2000).

Accordingly, and in line with SIT and the model by Shelton and colleagues, the present research conceptualizes meta-perceptions of the superordinate group as indicators of threat to majority members' superior status and minority members' sense of inclusion. Specifically, the more that majority members attribute low relative ingroup prototypicality and low relative preference for adoption to the minority outgroup, the more these meta-perceptions should be experienced as threatening. For minority members, meta-perceptions of low ingroup prototypicality and low preference for cultural maintenance are conceived of as threats to their subgroup's distinctiveness and inclusion into the superordinate group. As such, though we operationalize majority and minority members' threats with the same constructs, namely prototypicality perceptions and acculturation preferences, we still believe that they can be

understood as differential threats, because following our reasoning above, believing the outgroup to perceive an inferior position bears quite different meanings and implications for majority versus minority groups.

Initial evidence regarding the proposition that the experience of threat becomes more likely with stronger beliefs that the outgroup has a different view on the shared group, namely one that puts the ingroup's culture, values, and attributes in a less favorable or advantageous position compared with one's own perception comes from the already mentioned studies on the prediction of symbolic and realistic threat by acculturative 'fit' or convergence between own acculturation attitudes and those attributed to the outgroup (Piontkowski, Rohmann, & Florack, 2002; Rohmann, Florack, & Piontkowski, 2006; Rohmann, Piontkowski, & van Randenborgh, 2008; Zagefka & Brown, 2002). It was recently proposed that experiencing divergent acculturation orientations as identity threatening can be explained by 'cultural intertia', namely the desire to avoid social change (Zárate & Shaw, 2010). Zárate and Shaw argue that majorities prefer assimilation because it preserves the ingroup's norms, values, and culture as they are. Conversely, multiculturalism would require majorities to change, and therefore poses a threat to their ingroup's superior status quo. On the other hand, minorities generally prefer multiculturalism over assimilation because the latter poses a distinctiveness or exclusion threat (for similar arguments, see Eidelman & Crandall, 2012; Hornsey & Hogg, 2000). Important for our subsequent line of arguments, Zárate and Shaw also propose that the experience of a social identity threat becomes more likely with increasing identification, especially among minority members who are highly identified with their subgroup.

Implicit in Zárate and Shaw's proposition is the suggestion that it is precisely the different view on the larger group *attributed to the outgroup* that group members experience as threatening. Yet, studies that have disentangled the separate contributions of own and attributed preferences that we are interested in are still scarce. The existing evidence almost exclusively targets ethnic majority members – presumably in order to examine how they respond to the preferences found to be favored by minority members in previous research. As such, in two early experiments, Dutch majority members displayed most favorable responses after learning that an immigrant had an assimilation orientation (Van Oudenhoven et al., 1998). Maisonneuve & Testé (2007) corroborated this finding by showing that French majority members liked targets more and perceived them to be more competent and warm after reading that an immigrant wanted to adopt the host culture. In contrast, negative outcomes seem likely when majority members attribute a preference for cultural maintenance

to immigrants, given that they themselves expect them to adopt. Accordingly, highly prejudiced majority members who attributed more cultural maintenance to the minority were more likely to over-categorize unfamiliar faces as belonging to immigrants (Kosic & Phalet, 2006). These studies provide initial evidence that, much in line with the social identity threat account, majority members can be affected by how much they perceive the minority to want cultural adoption and maintenance.

However, one correlational study with majority members in which own and attributed acculturation orientations were both assessed revealed that, though the author did not directly test their relative contributions, German majority members' own acculturation orientations were more strongly correlated with prejudice than were those attributed to the minority (Geschke, 2008). This correlational pattern may be interpreted as preliminary support for the idea that though majority members' meta-perceptions play a role in predicting intergroup outcomes, the importance of their own view is primary.

Together, the reported studies support our claim that metacognitions are crucial to take into account when it comes to representations of the shared larger group. Yet, while it has become clear that greater perceived divergence between own acculturation preferences and those attributed to the outgroup leads to threat and more negative outgroup evaluations, the current evidence (a) is still very limited in number, (b) does not go beyond addressing acculturation orientations, and (c) has largely only focused on either majority or minority group and is therefore not informative with respect to the differential relevance of own- and meta-perceptions for groups of unequal status and power. The present research addresses these questions.

In sum then, with respect to the superordinate category as intergroup comparison background that conveys information regarding the status relations, we expect that stronger beliefs that the outgroup perceives low (relative) ingroup prototypicality and that they prefer their own culture to be more representative of the larger group impacts on minority and majority members to the extent that these meta-perceptions pose a threat to the minority's inclusion into the superordinate group and to the majority's superior status quo, respectively. At the same time, it seems crucial to simultaneously account for group members' own perceptions and preferences in order to determine the driving force in the prediction of intergroup outcomes. Based on an integrative view of the social power and social identity threat accounts, majority members may be influenced more by their own relative to their meta-representations, while the reverse may apply to minority members.

But before we can proceed to detail our hypotheses, there is much reason to believe that the mentioned relationships are moderated both by the strength and by the specific pattern of group members' social identification. Based on SIT, social identity processes should only be relevant to those highly attached to their ingroup, and when a superordinate group is involved, dual identification with both the subgroup and the superordinate group should be the variable of interest (Gaertner & Dovidio, 2000; Waldzus et al., 2003). Importantly, however, it should be noted that 'dual identification' may bear very different meanings for majority versus minority groups. Therefore, with a focus on different patterns of identification within ethnic minorities, the role of dual identities will be discussed in greater detail in the following in order to derive our specific hypotheses.

2.4 Differently identified: The role of dual identification(s)

In line with social identity and self-categorization theory and research (Tajfel & Turner, 1986; Turner et al., 1987), superordinate category representations should be particularly relevant to group members who are highly identified with both the sub- and the superordinate group, i.e. to high dual identifiers (Gaertner et al., 1993; Mummendey & Wenzel, 1999). Accordingly, as mentioned above, high dual identification enhances the perception of relative ingroup prototypicality, and the link between superordinate category perceptions and intergroup attitudes (see Wenzel et al., 2007, for a summary of related evidence). Though convincing, evidence for this proposition until now only holds for equal or high-status majority groups, while the role of dual identification is unclear for low-status minority groups. In fact, we believe that due to reality constraints, the connection between and the meanings of subgroup and superordinate identities appear to be quite different for minority and majority groups. Indeed, research suggests that dual identification does not have the same meaning for majority versus minority groups (Benet-Martínez & Haritatos, 2005; Phinney, 2003; Phinney, Horenczyk, Liebkind, & Vedder, 2001; Simon & Ruhs, 2008; Verkuyten, 2005b), and this concept therefore deserves differential attention.

2.4.1 Dual identification in majorities

In ethnic majority groups, as is reflected in the pars-pro-toto effect mentioned above, the concepts of subgroup (e.g. White Americans) and superordinate group identities (e.g.

Americans) highly overlap and are often set equal, both in everyday language and implicitly (Waldzus, 2010). This implies that inasmuch as both categories highly overlap for majority members, so do sub- and superordinate category identifications. As such, for majority members, dual identification can be understood as a simple combination of both identifications: high dual identifiers are those who strongly identify with their subgroup and the superordinate group simultaneously, with a single 'dual identification' factor underlying both identifications (Simon & Ruhs, 2008). This factor has shown to be the driving force in determining the extent to which majority members relate their superordinate category representations to the evaluation of the intergroup relation (Waldzus et al., 2003). Thus, following the prediction derived from SIT that valued dimensions such as the superordinate group are especially important to high dual identifiers we expected dual identification to moderate the effects of majority members' superordinate group representations. Related SIT research has found support for the prediction that only high but not low identifiers are affected by group-relevant threats (Bizman & Yinon, 2001; Branscombe, Wann, Noel, & Coleman, 1993; Tausch, Tam, Hewstone, Kenworthy, & Cairns, 2007). However, in a study among ethnic majority Dutch in the Netherlands, Verkuyten (2009) found no support for a moderating, but only a direct effect of national identification on symbolic threat by the Muslim outgroup. Therefore, with regard to the effects of majority members' attributed perceptions, we examined but put forward no specific hypothesis for the moderating influence of dual identification.

2.4.2 Dual identification in minorities

In contrast to the majority, factors such as migration history, number, and status – i.e. reality constraints – make it almost impossible for ethnic minorities to think of subgroup and superordinate group as identical. For ethnic minorities, construing both identities as one (as within majorities) would fail to take into account the more complex meanings and consequences that different constellations of these two identities can bear (see Verkuyten, 2005b). For example, while research suggests that, on an explicit level, ethnic (subgroup) and national (superordinate) identities are often moderately positively related even for minority members (Noels, Leavitt, & Clément, 2010; Phinney, Horenczyk, Liebkind, & Vedder, 2001; Phinney & Rosenthal, 1992; Verkuyten, 2005b), there is also evidence that ethnic minority members' subgroup and superordinate group identities can be rather dissociated on an

implicit level (Devos et al., 2010). As such, if the concept of dual identities as defined for majorities were applied to minority members in the same way, one would fail to recognize that reality constraints render the experience of sub- and superordinate identities as identical highly unlikely for minority members. Rather, both identities should almost always be considered as at least partly distinct, and, moreover, variable in the degree to which they are compatible and merged.

Indeed, even if both identities are highly relevant, they can at the same time be experienced either as complementary or in opposition to each other (Benet-Martínez, Leu, Lee, & Morris, 2002; Benet-Martínez & Haritatos, 2005; Huynh, Nguyen, & Benet-Martínez, 2011). Related literature on biculturalism suggests that the way biculturals identify with their culture of origin and the culture of the larger society they live (and/or were born) in can take on multiple forms (Birman, 1994; LaFromboise, Coleman, & Gerton, 1993; Phinney & Devich-Navarro, 1997; Verkuyten, 2005b). Recently, Benet-Martinez and her colleagues (Benet-Martínez et al., 2002; Benet-Martínez & Haritatos, 2005; for a recent review, see Nguyen & Benet-Martínez, 2012) have proposed a bicultural identity integration scale (BII) that broadly differentiates between two groups of biculturals. Those who perceive their ethnic (subgroup) and national (superordinate group) identities to be compatible and integrated show an identity pattern that across the literature has almost interchangeably also been labeled as 'dual', 'merged', 'integrated', or even 'hyphenated'. To exemplify, these individuals view themselves as 'Mexican American' or 'American' rather than as 'A Mexican in America' (e.g., Benet-Martínez, Leu, Lee, & Morris, 2002; Benet-Martínez & Haritatos, 2005). This combination becomes possible because the two identities are not defined on the same level of abstraction and they are not mutually exclusive but contextually salient (Verkuyten, 2005b).

In contrast, biculturals with low BII scores struggle with their dual identities and are particularly sensitive to tensions between the two, finding it problematic to constantly having to alternate between the two. These minority members often have stronger ties with their ethnic subgroup than those with more integrated identities (Phinney & Devich-Navarro, 1997), as if to 'protect' their ethnic identity from being assimilated by the larger superordinate one. This may be why this group has also been labeled as 'separatist' identifiers (Simon & Ruhs, 2008) or those showing an 'ethnic' 'dissociated', 'segregated' or 'separate' identity pattern (Berry, 1997, 2001; Berry, Phinney, Sam, & Vedder, 2006; Hutnik, 2001; Verkuyten, 2005b).

Notably, though both types have 'dual identities' because both identify as having two cultures, it appears that those minority members with compatible identities more strongly emphasize and focus on the superordinate identity (in which the subgroup identity is integrated, but subsumed), while those with more separate and conflictual identities are especially attached to their subgroup identity (Benet-Martínez & Haritatos, 2005; Huynh, Devos, & Smalarz, 2011; Nguyen & Benet-Martínez, 2010; Verkuyten, 2005b). This differentiation might be most crucial, because these different foci seem to have specific implication for these two groups within the minority.

Regarding the former, although a merged or integrated identity pattern reflects a complex integration of both (or more) identities, its stronger superordinate focus may ultimately lead to assimilative identities (Esser, 1980), characterized by a high perceived overlap in the norms, values, behavior of minority and majority, majority contact, and a high readiness to adopt the majority's culture (see also Verkuyten, 2005b; Zick et al., 2001). In other words, these individuals are culturally assimilated, but still retain a sense of ethnic belonging or at least categorize themselves according to their ethnic origin (see Verkuyten, 2005b). Expressed through the lense of social identity theory and research, merged identifiers' focus on the superordinate identity might be or have become a way to enhance or sometimes replace their poorly regarded subgroup identity (see Hornsey & Hogg, 2000, p. 152). This can be understood as reflecting assimilative tendencies in terms of an individual mobility strategy attempted by low identifiers within a disadvantaged group (Branscombe & Ellemers, 1998; Mummendey et al., 1999).

Still, we will label this group of identifiers as 'merged' rather than assimilated for two reasons. First, while they are relatively less identified with their subgroup compared both with the superordinate group and with the group of separate identifiers, they do indicate that their subgroup identity is a meaningful part of them (Verkuyten, 2005b). Second, we will use the term 'merged' to describe the easiness with which they switch between both identities (LaFromboise et al., 1993; Phinney & Devich-Navarro, 1997; Verkuyten, 2005b).

With respect to the more subgroup-focused minority members, who we will refer to as 'separate identifiers', (re-)establishing the distinctiveness of their group should be primary to them, due to their greater concern that the minority is not recognized and accepted as such by the majority (Branscombe & Ellemers, 1998; Hornsey & Hogg, 2000; Schmitt & Branscombe, 2002b). Being highly sensitive to signs of rejection or discrimination, the negative effects resulting from perceived discrimination, feeling categorized or stereotyped

reviewed above should especially apply to this group. They are also the ones prone to ultimately turning from separate identifiers to separatists (Simon & Ruhs, 2008) and likely to show strong religious beliefs, as well as extremist attitudes and behavior (e.g. Geschke, Möllering, Schmidt, Schiefer, & Frindte, 2012).

Having extracted merged vs. separate identification as a more differentiated account of minority members' dual identities, we will now argue that and how superordinate category representations should be differentially related to intergroup evaluations for these two groups within the minority. Importantly, the minority psychology described in the social power approach should especially apply to minority members who are separately identified. As outlined above, those are the ones who are highly identified with their subgroup, concerned over their marginalized position, their recognition and the existence of their group (see also Heitmeyer, 2011). While merged identifiers feel that they are an integral part of the larger group, separate identifiers should be the ones who feel that their subgroup is in the powerless and dependent position. Thus, it follows that even though merged and separate identifiers may be equally aware of the majority's perspective and its potential divergence with the minority's view, separate identifiers should be much more likely to perceive the majority's perspective as threatening.

Separate identifiers are concerned about the inclusion of their subgroup while at the same time knowing that not they themselves, but the majority has the power to (primarily) determine their subgroup's position within the superordinate group. Following the social power account, they should be strongly attentive to and tuned towards the majority perspective in order to determine the position of their minority subgroup. Thus, what guides their intergroup evaluations may not primarily be their own representations of the superordinate group, but rather the perception they attribute to the majority outgroup.

In contrast, merged identifiers should overall be comfortable with the status quo, and appreciate the larger group as it is. Their merged identity has a strong emphasis on the larger group, and which should consist more of majority than minority elements. In fact, it is likely for these individuals to perceive a strong overlap between their identification as a superordinate group and as a majority member. Thus, it may not make sense for merged identifiers to talk about the majority subgroup as their 'outgroup', but it is plausible to assume that both groups are considered to be two ingroups between which these biculturals

successfully alternate (Benet-Martínez & Haritatos, 2005; LaFromboise et al. 1993)[3]. One could even go as far as to argue that the distinction between superordinate group, majority, and minority identity has become meaningless to these individuals as all together have formed a new, hyphenated identity (Verkuyten, 2005b).

Because merged minority members highly identify with the majority elements of the superordinate group, perceiving high prototypicality of the majority and adopting the mainstream culture should not be threatening but desired. Thus, we expect merged minority members to show correlational patterns between superordinate category perceptions and intergroup evaluations similar to those of majority members: Higher relative prototypicality of the majority outgroup and stronger preferences for cultural adoption should be related to more positive attitudes towards them, and a stronger position of the minority should complementarily be related to more positive attitudes towards the minority ingroup. Further, with respect to the influence of merged identifiers' meta-perceptions, even though they should be aware of the majority's perspective and its potential divergence with the minority's view, ingroup projection on behalf of the majority should not be threatening to them, unless this harms their dual identity, i.e. the perception that they are part of a complex superordinate group.

In sum, we expect minority members' own perspective to be more influential than the perspective attributed to the majority the more their identity focus shifts to the superordinate group, i.e. the more they have a merged identity. Conversely, the relevance of meta-perceptions should increase with shifting attention to the (threatened) inclusion of the subgroup, which is more likely to be the case for separate identifiers. Regarding the majority, we expect to replicate previous evidence regarding the role of own superordinate category perceptions and additionally explored whether meta-perceptions can also be influential in majority members' intergroup evaluations. Specifically, we expected meta-perceptions of the superordinate category to predict intergroup outcomes to the extent that they pose a threat to the majority's superior status quo and their ideal of assimilating the minority to the majority-defined prototype of the superordinate group.

[3] However, because the present research is not restricted to this minority subsample, we will continue to use the ingroup-outgroup distinction.

2.5 What WE think or what THEY think?

2.5.1 Overview of the present research

With the present research, we aimed to accomplish several goals. Overall, we sought to establish that meta-perceptions of the superordinate group are crucial to take into account next to group members' own perceptions in order to explain intergroup relations, especially when the ingroup's status and position are perceived to be at stake. Thereby, we aimed to test whether the general tenet of the IPM, namely the prediction of intergroup evaluations by superordinate group representations, can be extended to low-status groups such as ethnic minorities by additionally taking into account group members' meta-perceptions of the superordinate group as well as their identification type with the sub- and superordinate group. Together, the aim of our research was threefold.

First, following previous IPM and acculturation research, we attempted to replicate that majority and minority subgroups objectively diverge in their superordinate category representations, with respect to relative prototypicality (Studies 1 and 2), and acculturation preferences (Study 3). Second, we aimed to show that group members' meta-perception of how the outgroup is believed to represent both groups within the superordinate group is different to their own perception, particularly among minority members who are more likely than majority members to experience their subgroup's identity and status as threatened. We tested this proposition by contrasting group members' average own- and meta-perceptions against each other. Third and most central, the present studies examined the predictive power of superordinate group meta-perceptions relative to majority and minority members' own perception in the prediction of intergroup evaluations, additionally differentiating between group members' identification type as a moderating variable.

The present studies all abide to these three goals, but each study also has its unique focus. Specifically, we took a conservative approach in Study 1 by testing our predictions in a relatively harmonious rather than tense intergroup context. Additionally, this setting, namely a *city* as superordinate reference category, has not been studied previously within the IPM, and was employed here for the first time. Study 1 also explored the moderating function of different identification patterns in minority and majority group members.

Study 2 builds on Study 1 in several respects. It aimed to replicate the findings of Study 1 in different and broader contexts, in order to allow for their generalizability. Study 2 also more clearly differentiates between merged vs. separate identification as the specific

moderating variable within the minority for determining the impact of own- vs. meta-perceptions of (relative) ingroup prototypicality. Moreover, Study 2 examined whether the effects can be extended to further intergroup attitudes and appraisals.

Finally, Study 3 tested whether the idea that own- and meta-representations of the superordinate group are differentially relevant to majority and minority members also applies to acculturation orientations. Further specific to Study 3 is the longitudinal design which allows us to investigate the impact of group members' own and attributed acculturation preferences on their intergroup orientations over time.

2.5.2 Hypotheses

From our theoretical arguments, we derive four hypotheses to be tested in the present research, which are specified below and graphically modelled in Figure 3.

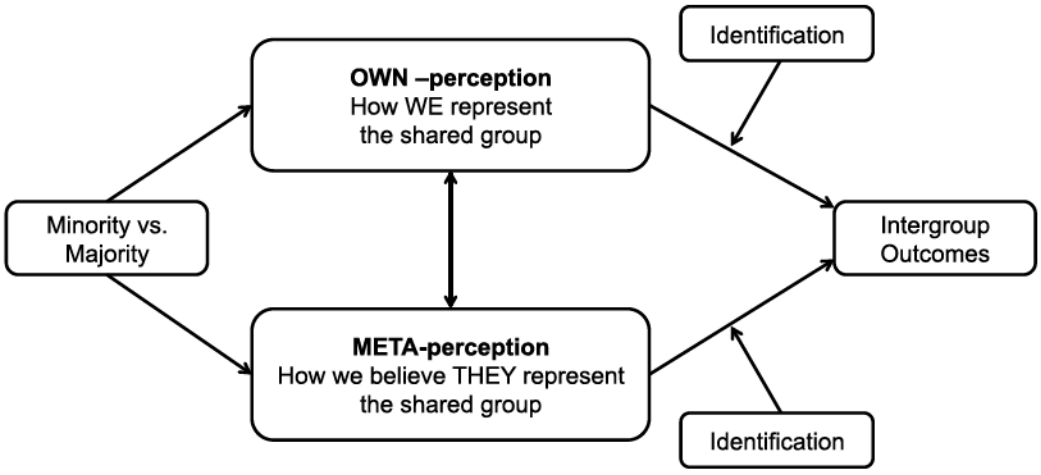

Figure 3. Theoretical model of the relations between superordinate group representations and intergroup outcomes.

H1: Objective Divergence

Relative to minority members, majority members perceive higher relative prototypicality of the majority and have a stronger relative preference for cultural adoption by the minority.

H2: Subjective Divergence

Group members believe that the outgroup's perspective differs from their own in a direction that puts the outgroup in a better position (and the ingroup in a less favorable position) compared with their own perspective.

H2a: Majority members expect the minority to perceive less relative prototypicality and less relative cultural adoption relative to their own view.

H2b: Minority members think that the majority perceives higher relative prototypicality and want more cultural adoption (and less maintenance) compared with their own perception.

H3: Own- vs. meta-perceptions as predictors

The direction and strength in prediction of intergroup outcomes by own- and meta-perceptions of the superordinate group depends on group status (majority vs. minority) and identification type.

H3a: For majority members, own perceptions of the superordinate group are stronger predictors of intergroup outcomes than their respective meta-perceptions, especially in high dual identifiers. Higher relative prototypicality and a stronger relative preference for adoption predicts less positive intergroup outcomes.

H3b: If majority members' meta-perceptions impact on their intergroup relation, then in the opposite direction to their own perceptions. That is, attributing lower relative prototypicality and a weaker relative preference for adoption to the minority predicts less positive intergroup outcomes.

H3c: For the minority, impact and direction of own- and meta-perceptions of the superordinate group depend on whether they are separate or merged identifiers. Separate identifiers should be guided by their meta-perceptions more than by their own perspective when evaluating the intergroup relation, and the reverse should be true for merged identifiers.

H3d: Own perceptions of lower (relative) outgroup prototypicality and a weaker (relative) preference for cultural adoption predict less positive intergroup outcomes among merged identifiers, while the relation is absent or reversed among separate identifiers.

H3e: Attributing low (relative) ingroup prototypicality and a weaker preference for cultural maintenance to the majority predicts less positive intergroup outcomes among separate identifiers, while the relation is absent or even positive among merged identifiers.

H4: Interrelations between own- and meta-perceptions

Due to projection processes, own- and meta-perceptions are positively correlated, but over time, own perceptions are influenced by meta-perceptions more than vice versa.

2.5.3 The intergroup context

Our studies were all conducted in the context of the relationship between group members of German versus Turkish descent within Germany, including various German cities. Migrants with Turkish background systematically immigrated since the early 1960s (originally as so-called guest workers), and today constitute the largest 'foreign community' within Germany. Representing about 3.5% of the general population (Berlin Institut, 2009), this ethnic minority is the most visible among Germany's migrants: about 16% of the people with migration background are from Turkish descent (Bundesamt, 2009). In general, the relation between "German Germans" and "Turkish Germans" (or so-called German-Turks) within Germany can generally be described as rather tense, the latter facing substantial levels of violence, discrimination and rejection (Wagner, van Dick, Pettigrew, & Christ, 2003). This situation is intensified by the increasing tendency of the general public to set being Turkish equal to being Muslim, whereby 'Muslims' have come to represent the threat to society per se (e.g. Heitmeyer, 2011; Verkuyten & Yildiz, 2007). At the same time, several municipalities – among those the city of Frankfurt, in which our first study was conducted – have made substantial and fruitful efforts to advance their integration policies. As a result, the rather conflictual relation on the national macro-level does not always also apply to the communal meso-level (see also the Study 1 context description below).

People with Turkish background constitute the largest but least well-integrated subgroup of migrants in Germany, mostly due to low education and weak German language skills (Berlin Institut, 2009). They also fare less well than citizens of German origin in terms of education, employment, and health (Bundesministerium, 2011). Many among them are thus far from equal participation in societal life. In areas with a dense Turkish population, segregation has developed, resulting in parallel societies. Thus, because of their large number as well as integration problems, the German-Turkish intergroup relation is of great importance to the German society.

3 Empirical Evidence

3.1 Study 1

We tested our predictions with German (ethnic majority) and Turkish (ethnic minority) citizens of one of the major towns in Germany (Frankfurt am Main) with a high percentage of Turkish migrant inhabitants. Frankfurt is home to 26% of non-Germans, and the majority (20%) of these hold Turkish citizenship (Bundesamt, 2008). Home to people from many different countries and cultures, the city of Frankfurt has advanced integration with many diverse projects and policies since the late 1980s. As a consequence, the intergroup relation between Germans and Turks from Frankfurt can considered to be less tense than in other German cities. This comparatively constructive atmosphere therefore constitutes a strong test of our hypotheses, as following the social identity threat account we would assume the role of meta-perceptions to be much stronger in regions where Germans and Turks do not live together as calmly as in Frankfurt, i.e. under conditions of more insecure status relations.

As such, 'Frankfurters' constituted the superordinate category, 'Germans from Frankfurt' and 'Turks from Frankfurt' were the labels for the majority and minority subgroup, respectively[4]. For the majority, we predicted the strong overlap between subgroup and superordinate identifications to form a dual identification scale that moderates the effects of own and attributed relative ingroup prototypicality, with the links being especially pronounced for high dual identifiers. For the minority, matters are more complex. Although not explicitly dealt with in research with minorities where the 'dual' in dual identities is largely if not always assumed to involve the ethnic subgroup and the superordinate group, some research indicates that the strong overlap between majority subgroup and superordinate group that has been found in majority groups (cf. the pars-pro-toto effect, Waldzus et al., 2003; and the American = White effect, Devos & Banaji, 2005) may not be as pronounced in minority groups (Waldzus et al., 2004). In other words, the term 'national' (or 'German', or 'American') may sometimes be interpreted as comprising all individuals within the larger superordinate groups, but at other times as referring to the majority subgroup only (see also Verkuyten, 2005b). For this reason, in this first study, we did not employ a direct measure of

[4] The category labels had been pre-tested in semi-structured interviews. Both residents of Frankfurt with German and Turkish background judged the category labels to be plausible, relevant, and indicated hat they identified with the superordinate and their respective subgroup label.

separate vs. merged identification within the minority, but instead wanted to examine the single contributions of minority ingroup, majority outgroup, and superordinate identification in the attempt to extract the combinations that make up both forms of dual identities. Thereby, we assumed that majority and superordinate identification would be highly similar moderators.

Thus, we tested whether minority identification moderated the relations between own and meta-perceptions of prototypicality in opposite direction to majority / superordinate identification. We specifically predicted that to evaluate the intergroup relation, separate identifiers, as indicated by high minority identification in the present study, are primarily guided by their meta-perceptions, whereas those with rather merged identities, as indicated by high majority / superordinate identification, primarily rely on their own perceptions.

However, we were also interested in and tested superordinate identification as a dependent variable, especially whether high minority identifiers would dis-identify with the superordinate group the more they believed the majority found the minority less prototypical, but also whether among high majority identifiers, stronger superordinate identification would be predicted by higher outgroup and/or lower ingroup prototypicality.

Previous IPM research has shown that in high-status or majority groups, the effects of relative prototypicality often driven by outgroup prototypicality, but also by ingroup prototypicality, or equally by both (Wenzel et al., 2007; Ullrich, 2009). On the basis of this evidence, with respect to the majority, we were primarily interested and tested the effects of *relative* prototypicality (in terms of a quotient score). As to the minority, the data are inconclusive, and our theoretical arguments strongly suggest that attributed *ingroup* prototypicality may be what matters most to separate identifiers, while *outgroup* prototypicality should be driving the effects among the merged identifiers. Moreover, the composition of their dual identities implies that, albeit to a different degree depending on the type of dual identity, minority members like to see both groups represented in the superordinate group. Thus, perceptions of ingroup and outgroup prototypicality are likely to be related to intergroup outcomes in the same direction. In this case, the overall effect of a relative measure (quotient score) could be reduced or distorted. For these reasons, with respect to the minority, we were primarily interested in the separate effects of ingroup and outgroup prototypicality perceptions rather than the relative scores.

3.1.1 Method

Participants and Design

We recruited 168 citizens of Frankfurt, who self-identified as either Turkish (n = 66) or German (n = 102). Participants were mainly recruited in two pedestrian zones. In order to gain a sufficiently large sample of the Turkish population in Frankfurt, subsamples of the Turks were approached in a migrant association (n = 12) and in a district with a high percentage of foreign population (n = 15). One German and two Turkish participants were excluded due to extreme response patterns, leaving a total of N = 165 (64 Turkish, 101 German) participants for analysis. The study consisted of a 2 (status: majority vs. minority) x 2 (perspective: own vs. meta) x 2 (order: own vs. meta-perspective first) mixed-model design. Order of assessing own- or meta-perception was counterbalanced.

Procedure

Participants were approached individually and handed out a sheet that introduced the study, made their sub- and superordinate group identity salient, and asked participants to categorize themselves as either a German or a Turk from Frankfurt. Depending on which category was checked, participants were given either the German (yellow cover sheet) or Turkish (blue cover sheet) version of the questionnaire. The Turkish questionnaire was available in two languages (26 Turks chose the Turkish version). Sub- and superordinate category identification scales were assessed before both perspectives of ingroup and outgroup prototypicality measures were consecutively presented, followed by the attitude items, whereby attitudes toward the outgroup were always assessed prior to ingroup attitudes. Filler items between the assessment of own- and meta-perceptions aimed to minimize the difficulty to distinguish both perspectives. Participants then completed a socio-structural variables scale that consisted of items measuring perceived group status as well as perceived stability, legitimacy and permeability of the intergroup status relation. Lastly, socio-demographic variables were collected and participants were given the opportunity to express their thoughts about the questionnaire. After completion, they were thanked, fully debriefed, and payed three Euros for compensation.

Measures

Unless stated otherwise, responses were made on 7-point scales ranging from 1 (completely disagree) to 7 (completely agree).

Identification measures

Identification with the majority subgroup, the minority subgroup, and with the superordinate group were assessed with three separate items that asked how close and connected participants felt to the subgroup of the 'Germans from Frankfurt', the 'Turks from Frankfurt' and to the superordinate group of all 'Frankfurters'. Specifically, for each item, participants were to choose one of seven pictures that differed in the amount of overlap between a small circle (representing the self) and a bigger circle (representing the group), varying from no to perfect overlap. Expectedly for the majority sample only, the items for majority subgroup and superordinate group identification could be combined to form a scale of dual identification, $\alpha_{maj} = .71$.

Prototypicality measures

Own perceptions of ingroup and outgroup prototypicality. Own perceptions of ingroup and outgroup prototypicality were assessed with two respective questions, namely 'How typical are the [Turks from Frankfurt / Germans from Frankfurt] for the Frankfurters in general?', with responses ranging from 1 'not typical at all' to 7 'very typical'. Prototypicality of the Turks was always assessed prior to prototypicality of the Germans, and the quotient of ingroup divided by outgroup prototypicality was used as a measure of relative prototypicality (see Ullrich, 2009)

Meta-perceptions of ingroup and outgroup prototypicality. The same items as for participants' own perception were used, except that the instruction differed: participants were made aware that for this question, they were asked to indicate what they believed their outgroup thought. Specifically, they were asked to separately indicate how typical or representative they believed their outgroup perceived ingroup and outgroup to be for the superordinate group. Again, we computed the quotient of these two items to obtain an indicator of participants' attributed relative prototypicality.

Measures of intergroup attitudes

Attitudes towards the majority. Four randomly ordered items assessed attitudes towards the German majority, namely (1) 'I like the way the Germans from Frankfurt think and live', (2) 'I am open and friendly towards the Germans who live in Frankfurt', (3) 'If my financial situation allowed it, I would donate money for the German culture in Frankfurt', and (4) 'It would be nicer to have less Germans in Frankfurt' (reverse coded). Scale reliabilities were $\alpha_{maj} = .52$ for the majority, and improved from $\alpha_{min} = .40$ to $\alpha_{min} = .50$ for the minority after removing the reverse-coded item (4) from the scale.[5]

Attitudes towards the minority. We assessed attitudes towards the Turkish minority with six items, the first four of which corresponded to the items for the evaluation of the majority, namely (1) 'I like the way the Germans from Frankfurt think and live', (2) 'I am open and friendly towards the Germans who live in Frankfurt', (3) 'It would be nicer to have fewer Germans in Frankfurt' (reverse coded), and (4) 'If my financial situation allowed it, I would donate money for the German culture in Frankfurt'. Two additional items were specific to the minority, namely (5) 'I would welcome the construction of a mosque for the Turks in Frankfurt', and (6) 'The Turks who live in Frankfurt greatly enrich the town'. For both groups, the items could be combined to form a single scale, $\alpha_{maj} = .76$ and $\alpha_{min} = .71$.

Ingroup bias. On two separate items, participants were asked to indicate the degree to which they globally evaluated the ingroup and the outgroup positively, with responses ranging from 1 'rather negatively' to 7 'rather positively'. The difference score between these two items constituted our measure of ingroup bias, whereby higher scores indicated greater ingroup favoritism.

Socio-structural variables. One item measured perceived *ingroup status*, namely 'The Germans who live in Frankfurt are better off than the Turks who live in Frankfurt' (reverse coded for the Turkish participants). *Perceived legitimacy* of the status differences was assessed with the item 'I think the disadvantage of Turks who live in Frankfurt - compared to Germans who live in Frankfurt - is really unfair' (reversed), and the item measuring *perceived stability* of the status differences was 'In my opinion, the relation between the Turks and the Germans will change in the next years' (reversed). We assessed *perceived permeability* using the item 'In principle, it is not hard for Turks to be regarded as Germans'.

[5] Despite their rather low reliabilities, we will report the analyses using the scales rather than the single items separately, because direction and strength of effects was similar across all items.

3.1.2 Results

Preliminary Analyses

Following Cohen and colleagues (Cohen, Cohen, West, & Aiken, 2003) missing values were considered to be missing at random (MAR), and were estimated using using linear trend at the point imputation. Including order as factor did not interact with the prototypicality measures, and was therefore omitted from all analyses.

For a meaningful comparison of the mean differences between groups and perspectives and to be able to test our objective and subjective divergence hypotheses in a single analysis, the relative prototypicality score was coded in the direction of relative prototypicality of the German majority (quotient of Turks' divided by Germans' prototypicality), while for the regression analyses, we used the commonly employed relative *ingroup* prototypicality score, dividing ingroup by outgroup prototypicality[6].

Means and intercorrelations

A comparative view of the means (Table 1) and correlations (Tables 2a and 2b) between majority and minority subgroups revealed several notable patterns that distinguish majority and minority samples.

Possibly reflecting the rather harmonious intergroup situation in the context of Frankfurt, both subgroups tended to agree on the socio-structural aspects of the status relations (all Fs $\leq$ 1.03, *ns*). A separate examination of mean differences from the scale midpoints revealed that minority members perceived the status relations to be rather legitimate, $t(63) = -1.13$, *ns*, but instable, $t(63) = -2.53$, $p = .014$, and not permeable, $t(63) = -3.24$, $p = .002$. Thus, though the minority seemed to accept the majority's higher status as legitimate, they also perceived that the status relations would change in the near future, yet not to their advantage in terms of upward mobility. Majority members perceived illegitimate, $t(100) = -3.26$, $p = .002$, but stable, $t(100) = -1.59$, *ns*, status relations, as well as impermeable group boundaries, $t(100) = -4.27$, $p < .001$. This indicates that though they were somewhat aware of an unjust status quo, majority members did not think that change would come about quickly, and certainly not through more permeable group boundaries.

[6] Along with other researchers (Kessler et al., 2010), we did not use difference scores due to the difficulties associated with using these scores as predictors in a multiple regression (Ullrich, 2009).

In line with our hypothesis that own- and meta-perceptions are positively correlated, the prototypicality measures were all interrelated in both samples, which supports previous findings of moderate correlations due to projection processes between group members' own perceptions and those attributed to the outgroup (e.g., Judd et al., 2005). Among majority participants, only own perceptions of relative ingroup prototypicality were correlated with intergroup evaluations, while no such relations were significant for their relative meta-perceptions, in line with our respective prediction. In the minority sample, there was only one signficant correlation between prototypicality perceptions and intergroup evaluations, namely a positive relation between higher attributed ingroup prototypicality and more positive ingroup attitudes. This lack of correlations may suggest that, in line with our predictions, a moderating variable (such as identification) determines these relationships in the minority sample.

With respect to the identification measures, majority and minority members had comparably strong levels of identification with the superordinate group of Frankfurters, and did also not differ in their strength of identification with their respective own subgroup. Moreover, majority members' identification with the minority outgroup was below the scale midpoint, while minority members showed a substantial degree of identification with their majority outgroup. This reflects the differential relevance of the two subgroup identities for majority versus minority members. In line with the idea that minority and majority identities overlap only among minority but not majority members, the three identification items are significantly interrelated in the minority sample only, while outgroup identification and dual identification are independent in the majority sample.

While majority members had more favorable ingroup than outgroup attitudes, minority members' ingroup and outgroup attitudes were equally positive. This is supportive of the idea that majorities have a clear preference for their own subgroup, whereas minorities show less or no ingroup bias (as in this study), and sometimes even a bias towards the outgroup. Furthermore, ingroup and outgroup attitudes were unrelated in the majority, whereas the correlation was significant and positive in the minority, additionally pointing towards the stronger overlapping identities within this group.

In sum, the means and correlations support our reasoning that the chosen intergroup context provides a conservative ground for testing our hypotheses, since it can broadly be characterized by mutual consensus between both subgroups regarding their socio-structural relationship. Furthermore, as expected, own- and meta-perceptions of prototypicality were

positively interrelated, and the patterns regarding group members' identification with the subgroups and the superordinate group underline our emphasis of taking different forms of identification between and within both groups into account.

Table 1. *Means (and standard deviations) of all variables for majority and minority samples in Study 1.*

	Majority (N = 101)		Minority (N = 64)	
	Mean	(SD)	Mean	(SD)
own-Prot. IG	4.58	(1.58)	3.89	(1.57)
own-Prot. OG	3.58	(1.77)	4.59	(1.67)
meta-Prot. IG	4.30	(1.78)	3.14	(1.63)
meta-Prot. OG	3.75	(1.78)	4.56	(1.84)
own-RP	1.72	(1.36)	0.95	(0.58)
meta-RP	1.43	(1.09)	0.79	(0.44)
Ingroup attitudes	4.64	(1.08)	4.50	(1.27)
Outgroup attitudes	4.17	(1.23)	4.43	(1.22)
Ingroup bias	0.61	(1.66)	-0.05	(1.30)
Ingroup status	4.52	(1.80)	3.45	(1.88)
Perc. legitimacy	3.39	(1.87)	3.38	(1.68)
Perc. stability	3.70	(1.87)	3.69	(2.14)
Perc. permeability	3.20	(1.89)	3.49	(1.63)
Dual identification	5.04	(1.42)	--	--
Sup. Identification	5.38	(1.68)	5.23	(1.85)
Min. Identification	3.51	(1.59)	4.88	(1.68)
Maj. Identification	4.86	(1.60)	4.34	(1.72)

Note: Perc. = perceived, Sup. = superordinate, Min.= Minority, Maj. = Majority.

Table 2a. *Correlations in the majority sample of the variables measured in Study 1.*

		2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	own-Prot. IG	.28**	.37**	.25*	.32**	.00	.21*	-.04	.22*	.02	.05	.05	.32**	.33**	-.15
2	own-Prot. OG		.15	.31**	-.66**	-.19	.18	.42**	-.15	-.02	-.22*	-.23*	.14	.27**	.11
3	meta-Prot. IG			.35**	.05	.39**	.26**	.16	.04	.00	-.01	-.11	.15	.17	-.09
4	meta-Prot. OG				-.03	-.55**	.25*	-.02	-.05	-.15	.10	-.14	.28**	.18	-.08
5	own-RP					.13	.06	-.49**	.31**	.03	.29**	.25*	.08	-.02	-.24*
6	meta-RP						.00	.15	.06	.08	-.06	.08	-.16	-.06	.04
7	Ingroup attitudes							.00	.13	-.13	.18	-.14	.20*	.30**	-.06
8	Outgroup attitudes								-.59**	.25*	-.39**	-.10	-.02	-.15	.48**
9	Ingroup bias									-.39**	.29**	.22*	.03	.30**	-.50**
10	Ingroup status										-.12	-.14	.08	-.07	.18
11	Perc. legitimacy											.16	.04	.10	-.22*
12	Perc. stability												.01	-.05	-.01
13	Perc. permeability													.25*	.03
14	Dual identification														.02
15	Minority identification														

Note: Perc. = perceived, * $p < .05$, ** $p < .01$

Table 2b. *Correlations in the minority sample of the variables measured in Study 1.*

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	own-Prot. IG	.44**	.25*	.35**	.37**	-.11	.05	.12	-.11	-.02	-.11	.17	.22	.27*	.18	.14
2	own-Prot. OG		.26*	.30*	-.50**	-.07	.17	.08	-.20	-.03	-.07	.00	.26*	.23	.16	.05
3	meta-Prot. IG			.27*	-.09	.53**	.26*	-.09	.10	.18	.14	.24+	.11	.06	.33**	.25*
4	meta-Prot. OG				-.11	-.59**	.04	.08	.00	-.04	-.19	-.05	.09	-.01	.29*	.14
5	own-RP					-.02	-.18	-.09	.00	-.11	-.06	.09	-.14	.02	-.02	-.16
6	meta-RP						.07	-.11	.13	.24	.30*	.20	.04	.10	.10	.16
7	Ingroup attitudes							.28*	.03	-.16	-.05	.14	.11	.04	.21	.07
8	Outgroup attitudes								.21	-.12	.06	.21	.09	-.07	.14	.06
9	Ingroup bias									.11	.02	.11	-.15	-.11	.04	.13
10	Ingroup status										.36**	.14	.09	-.11	-.11	.01
11	Perc. legitimacy											.26*	.07	-.06	.01	.06
12	Perc. stability												-.05	-.08	.14	-.12
13	Perc. permeability													.26*	.19	.05
14	Sup. identification														.38**	.32*
15	Minority identification															.41**
16	Majority identification															

Note: Perc. = perceived, Sup. = superordinate, * $p < .05$, ** $p < .01$

Main Analyses

Objective and subjective perspective divergence [7]

First, independent *t*-tests confirmed that the majority was perceived to be more relatively prototypical than the minority from all perspectives, as all relative scores significantly differed from 1 (the point of equal protypicality), $ts \geq 3.15$, $ps \leq .002$.

To test our hypotheses that majority and minority members objectively and subjectively diverge in their prototypicality representations, we first conducted a 2 (status: majority vs. minority) x 2 (perspective: own vs. meta) ANOVA on relative prototypicality of the Germans. The results are depicted in Figure 4. The analysis only yielded the expected interaction between group and perspective, $F(1,163) = 8.59$, $p = .004$, $\eta_p^2 = .05$. Simple effects to decompose this interaction supported our first hypothesis such that the majority tended to perceive higher relative prototypicality of the Germans relative to the minority, $F(1,163) = 2.79$, $p = .097$, $\eta_p^2 = .02$. Further, in partial support of our second hypothesis, own- and meta-perceptions differed within the minority (but not within the majority). As such, minority members expectedly believed that the majority perceived greater relative prototypicality of the Germans compared with their own view, $F(1, 163) = 6.26$, $p = .013$, $\eta_p^2 = .04$. However, the majority's meta-perception was only descriptively lower than their own perception, $F(1, 163) = 2.44$, $p = .120$, $\eta_p^2 = .02$.

In sum, comparison of the prototypicality means corroborated our prediction that, when compared with the minority's view, the majority perceives greater relative prototypicality of the German subgroup. Further in line with our predictions, minority members reflected this objective divergence subjectively, thinking that the majority perceived greater relative prototypicality of the Germans relative to their own perspective. We had also expected majority members to believe that, compared with their own view, the minority perceived less relative prototypicality of the Germans. Yet, there was only a descriptive tendency to support this expectation.

[7] In study 1, we also assessed prototypicality using pictorial measures (that are reported in study 2). These are not, however, reported in detail as the pattern of results did not differ from the typicality measures.

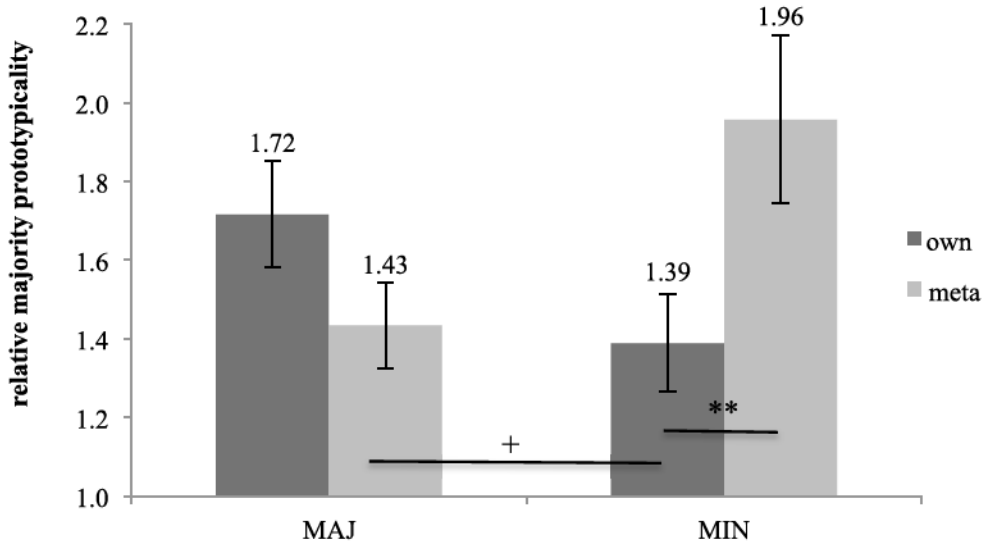

Figure 4. Means of own- and meta-perceptions of relative protoypicality of the Germans for majority and minority group members in Study 1. Scores (quotients) greater than 1 indicate higher relative prototypicality of the majority, $^{+}p < .10$, $^{**}p < .01$. Bars indicate standard errors.

To be complete, we also tested whether the effects of the relative indices were due to the Germans' or the Turks' prototypicality. Thus, we proceeded with a 2 (status: majority vs. minority) x 2 (target: Germans vs. Turks) x 2 (perspective: own vs. meta) mixed-model ANOVA on the single ingroup and outgroup prototypicality scores. Results are displayed in Table 3. The analysis yielded a main effect of target, $F(1,163) = 59.92$, $p < .001$, $\eta_p^2 = .27$, indicating that overall, prototypicality of the Germans was significantly higher than prototypicality of the Turks across status groups and from all perspectives, all Fs ≥ 7.42, all ps $< .007$. This main effect was qualified by the expected three-way interaction between status, target, and perspective, $F(1,163) = 7.70$, $p = .006$, $\eta_p^2 = .05$. In contrast to our objective divergence hypothesis and the tendency for objective divergence found on the relative scores, simple effects revealed that minority and majority members did not differ in their perceptions of either the Germans' or the Turks' prototypicality, both Fs < 1, *ns*.

At the same time, our subjective divergence hypothesis was supported among minority members such that their subjective perspective divergence was apparently driven by the belief that the majority viewed their *ingroup* as less prototypical compared with their own perception, $F(1,163) = 8.78$, $p = .004$, $\eta_p^2 = .05$. Again, as for the relative scores, there was no

subjective divergence within the majority, both Fs ≤ 2.02, *ns*, so that this hypothesis was not supported in the majority sample.

Thus, while the analysis using the single prototypicality scores specified that the subjective divergence perceived among minority members concerned the belief that they were perceived as less prototypical by the majority, it did, in absolute terms, not confirm the expected objective divergence between the two subgroups.

Table 3. *Means (and standard deviations) of the single own and attributed prototypicality scores for majority and minority in Study 1.*

	Own perception				Meta-perception			
	Prot. Maj		Prot. Min		Prot. Maj		Prot. Min	
Majority	4.58_a	(1.58)	3.58_b	(1.77)	4.30_a	(1.78)	3.75_b	(1.78)
Minority	4.59_a	(1.67)	3.89_b	(1.57)	4.56_a	(1.84)	3.14_c	(1.63)

Note: Prot. Maj = Prototypicality of the majority, Prot. Min = Prototypicality of the minority; significant mean differences (ps < .05) are indicated by different subscripts.

Prediction of intergroup attitudes

To test the relative contributions of group members' own and meta-perceptions of (relative) prototypicality in predicting intergroup attitudes, corresponding own- and meta-perceptions were simultaneously entered as predictors in all regression analyses. To be able to investigate the role of differential identification types within the majority versus the minority samples, we treated both samples in separate analyses.

Majority sample

In the majority sample, we tested whether group members' intergroup attitudes would be primarily predicted by their own- rather than their meta-perceptions of realtive ingroup protoypicality, especially with increasing dual identifiation. Specifically, own-perceptions of *higher* relative ingroup prototypicality should predict less positive outgroup attitudes, more ingroup bias, and more positive ingroup attitudes. If meta-perceptions impact on majority members at all, then these outcomes should result from stronger beliefs that the minority perceives *lower* relative ingroup prototypicality.

For all our dependent variables, separate multiple regression analyses were conducted, whereby the relative prototypicality scores (quotients) and dual identification were entered in

the first step, followed by the interactions with dual identification in the second step.[8] An overview of the regression analyses is presented in Table 4.

Intergroup attitudes

With respect to outgroup attitudes, more *ingroup bias* was predicted by higher relative prototypicality, and its interaction with dual identification. Simple slopes analyses confirmed that ingroup bias strongly increased with own perceptions of higher relative prototypicality only when dual identification was high, $b = .87$, $SE = .23$, $p < .001$, but not when identification was low, $b = .29$, $SE = .20$, $p = .140$. Conversely and as expected, group members' meta-perception did not predict ingroup bias.

Parallel to the effects on ingroup bias, the regression analysis on *outgroup attitudes* expectedly showed that less positive outgroup attitudes were most strongly predicted by group members' own perception of higher relative prototypicality, as can be seen in Table 6. This effect was qualified by the predicted interaction with identification. Probing the interaction confirmed our prediction that this relationship held especially for high dual identifiers, $b = -.89$, $SE = .15$, $p < .001$, and was less pronounced for low dual identifiers, $b = -.41$, $SE = .13$, $p = .003$. Moreover, though expectedly less strongly, participants' belief that the minority perceived the majority to be less relatively prototypical further predicted less positive outgroup attitudes, independent of dual identification.

More positive *ingroup attitudes* were predicted by higher dual identification, as well as the expected interaction between relative prototypicality and identification. Simple slopes analysis showed that there was a tendency for higher relative prototypicality to predict more positive ingroup attitudes only among high dual identifiers, $b = .26$, $SE = .15$, $p = .092$, but not among low dual identifiers, $b = -.10$, $SE = .13$, $p = .426$. Majority members' meta-perceptions were not predictive of ingroup attitudes.

Together, the analyses on all of our dependent variables provide strong support for our assumption that majority members' intergroup evaluations are primarily predicted by their own relative prototypicality perception, especially when they are highly identified with both the sub- and superordinate groups.

[8] The effects of the relative measures were typically more pronounced when controlling for the single (own and attributed) prototypicality measures, and this did not change the general pattern of results. Moreover, adding the relative measures, identification, and their interactions to the equation always improved the model (with the exception of perceived ingroup status), $F_{change} = 2.13$ to 5.45, $ps \leq .10$.

Additional Analyses

Socio-structural variables

We further examined the effects of majority members' prototypicality perceptions on the socio-structural measures, presented in Table 6. In line with previous findings, higher relative prototypicality predicted more perceived *legitimacy* of the status differences, and probing the interaction with dual identification confirmed that this was only true when dual identification was high, $b = 1.04$, $SE = .25$, $p < .001$, but not when identification was low, $b = .22$, $SE = .21$, $p = .298$. Higher relative prototypicality alone was also related to the perception that the intergroup relation was more *stable* and would not change soon. No significant effects were observed with respect to perceived *permeability*. Finally, only the interaction between attributed relative prototypicality and dual identification tended to predict ingroup *status*. Respective simple slopes analyses revealed that believing the minority to perceive higher relative prototypicality was related to perceptions of higher ingroup status, but unexpectedly only for *weakly* identified majority members, $b = .58$, $SE = .29$, $p = .052$, and not for the highly identified, $b = -.04$, $SE = .21$, $p = .829$.

In sum, the results replicated previous finding regarding the status legitimizing and stabilizing effects of perceiving higher relative prototypicality (especially among strong dual identifiers), and additionally indicated that meta-perceptions of relative prototypicality predicted ingroup status, though surprisingly only among weak dual identifiers.

Table 4. *Multiple regressions of own and attributed relative prototpyicality on the dependent variables in the majority sample of Study 1.*

	Outgroup attitudes						Ingroup bias						Ingroup attitudes					
	Step 1			Step 2			Step 1			Step 2			Step 1			Step 2		
	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*
(Constant)		40.27	.000		41.05	.000		3.90	.000		4.06	.000		44.66	.000		45.32	.000
own-RP	-.53	-6.17	.000	-.56	-6.62	.000	.32	3.36	.001	.35	3.65	.000	.04	.39	.698	.06	.65	.515
meta-RP	.22	2.57	.012	.19	2.12	.037	.01	.12	.907	.02	.17	.868	.05	.46	.649	.09	.82	.414
dual ID	-.16	-1.85	.068	-.15	-1.75	.083	.19	2.05	.043	.18	1.84	.070	.29	2.98	.004	.29	2.94	.004
own-RP x ID				**-.24**	**-2.67**	**.009**				**.20**	**1.95**	**.054**				**.22**	**2.13**	**.036**
meta-RP x ID				.09	.95	.344				-.02	-.16	.873				-.12	-1.08	.283

	Legitimacy						Stability						Permeability					
	Step 1			Step 2			Step 1			Step 2			Step 1			Step 2		
	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*
(Constant)		22.86	.000		23.86	.000		23.34	.000		23.10	.000		22.54	.000		22.25	.000
own-RP	**.29**	**2.97**	**.004**	.33	3.49	.001	**.30**	**3.16**	**.002**	.29	3.00	.003	-.03	-.33	.745	-.03	-.33	.743
meta-RP	-.01	-.11	.910	-.05	-.51	.613	.12	1.30	.196	.14	1.37	.173	**-.22**	**-2.24**	**.027**	-.22	-2.14	.035
dual ID	.22	2.33	.022	.17	1.86	.066	-.10	-1.06	.290	-.09	-.88	.382	.25	2.58	.011	.25	2.47	.015
own-RP x ID				**.24**	**2.44**	**.016**				-.05	-.50	.618				-.02	-.15	.885
meta-RP x ID				.11	1.09	.280				-.05	-.46	.649				.02	.21	.834

	Ingroup status					
	Step 1			Step 2		
	β	*t*	*p*	β	*t*	*p*
(Constant)		25.22	.000		25.38	.000
own-RP	.01	.09	.926	.00	.04	.966
meta-RP	.08	.81	.422	.15	1.42	.159
dual ID	-.13	-1.30	.197	-.10	-.93	.353
own-RP x ID				.04	.35	.725
meta-RP x ID				-.21	-1.83	.071

Note: own-RP = own perception of relative prototypicality, meta-RP = meta-perception of relative prototypicality, ID = identification; significant effects are printetd in bold.

Mediations by socio-structural variables

We continued to examine whether, following the IPM's tenets, own and attributed relative prototypicality were indirectly related to intergroup attitudes through perceptions of the social structure, i.e. perceived legitimacy, stability, permeability, and ingroup status, as displayed in Figure 5. To test these multiple mediators simultaneously, indirect effects analyses were conducted using the SPSS syntax MEDIATE provided by (Hayes & Preacher, 2011), which is considered to be superior to the traditional Sobel test (Baron & Kenny, 1986; Shrout & Bolger, 2002). Specifically, in this analysis the mediators are regressed on the independent variable (path a), and, the dependent variable is regressed on the mediators (path b), controlling for the independent variable. Bootstrap percentile 95% confidence intervals that fall outside of zero indicate that the indirect effect (a*b) is significant.

Consistent with the assumptions of the IPM and previous related evidence, we found that only perceived legitimacy mediated the effect of relative prototypicality on outgroup attitudes (controlling for dual identification). Specifically, higher relative prototypicality was related to higher perceived legitimacy, $\beta = .29$, $p = .003$, which in turn predicted less positive outgroup attitudes, $\beta = -.25$, $p = .009$, controlling for relative prototypicality. Though the direct effect of relative prototypicality remained significant, $\beta = -.41$, $p < .001$, the bootstrap interval did not include zero (-.1534, -.0009), indicating that the indirect effect was significant. No other indirect effects were significant.

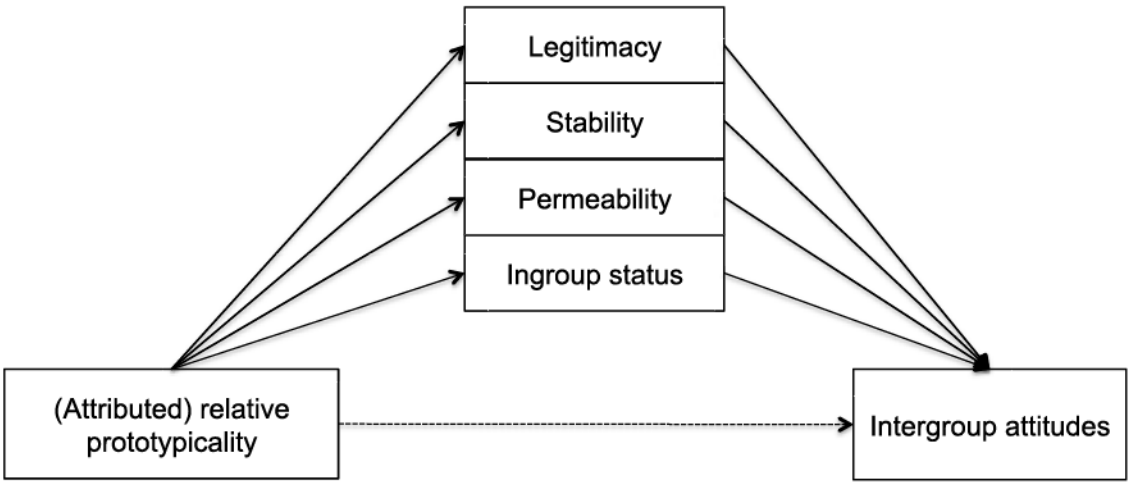

Figure 5. Illustration of the multiple mediation model.

However, in a post-hoc exploratory manner, a closer look at the correlational patterns showed that majority members' meta-perception of higher outgroup prototypicality was correlated with higher perceived permeability. This lead us to examine whether this relation could be explained through the dynamic between own- and meta-perceptions, i.e. whether believing that the minority found themselves more prototypical was related to a perception of more permeable boundaries because this belief affected one's own perception of ingroup or outgroup prototypicality. Indeed, the mediation analysis showed that attributed outgroup prototypicality predicted ingroup (but not outgroup) prototypicality, $\beta = .22$, $p = .013$, which in turn predicted permeability, $\beta = .32$, $p = .008$, and the 95% confidence interval of the indirect effect did not include zero [.0034 to .2063]. Importantly, testing the reverse mediation revealed that the indirect effect included zero, and was thus not significant. Thus, this pattern indicates that the belief that the majority found themselves prototypical was related to higher permeability, because it increased majority members' own perception that they were (also) more prototypical.

Minority sample

For the minority sample, we had reasoned that participants' own- and their meta-perceptions of ingroup and outgroup prototypicality taken separately rather than *relative* prototypicality explain intergroup outcomes. Therefore, the focus of analysis was on the single prototypicality measures[9]. Specifically, we tested the hypothesis that intergroup attitudes are predicted by meta-perceptions of ingroup prototypicality for strong *minority* identifiers, but by own-perceptions of ingroup and/or outgroup prototypicality for strong *majority* identifiers.

Preliminary multiple regression analyses in which the moderated effects of the four prototypicality measures by identification were analyzed separately for each of the three identification measures revealed that majority and superordinate identifications yielded, highly similar interaction effects. However, when majority and superordinate group identification and their interactions with the prototypicality were analyzed together in a single

[9] With the exception of the interaction between attributed relative prototypicality (quotient score) and majority identification predicting outgroup attitudes and ingroup status in the same way as the moderated effect of attributed ingroup prototypicality (single score) with majority identification, the relative scores and their interactions with the identification measures did not significantly contribute to the prediction of the other dependent variables, with the exception of perceived legitimacy (see results section).

regression analysis, the moderation effects involving majority identification remained while those of superordinate identification disappeared. This indicates that the effects of superordinate identification were mostly accounted for by majority identification. Therefore, we conducted our main regression analyses using the four prototypicality measures, as well as minority and majority identifications as predictors in the first step of the analysis, and the interaction terms of the prototypicality measures with ingroup identification and with outgroup identification in the second step. This also allowed us to examine superordinate group identification as a dependent variable.

Gender was controlled for whenever this variable significantly affected the dependent variable, namely in the prediction of outgroup attitudes and superordinate identification. For the sake of simplicity, only significant effects will be reported; the complete regression outcomes can be found in Table C1 of the Appendix. Please note that due to the small sample size relative to the predictors, effect sizes with $p \leq .10$ will be considered substantial and will therefore also be reported and interpreted.

Intergroup attitudes

In general, on all three measures minority and majority identification always interacted with one and the same prototypicality variable (albeit in opposite direction), and no other predictors were significant. Ingroup and outgroup attitudes were predicted by their interactions with with group members' meta-perception of ingroup prototypicality. Ingroup bias was predicted by the interaction of both identification measures with group members' own perception of ingroup prototypicality.

With respect to *ingroup bias*, the interactions with minority and majority identification were $\beta = -.33$, $p = .036$, and $\beta = .58$, $p = .003$, respectively. Probing these interactions supported our hypothesis for merged identifiers. Specifically, lower ingroup prototypicality was significantly related to less ingroup bias (or more outgroup bias) only among high but not low majority identifiers, $b_{high} = .65$, $SE = .24$, $p = .008$ vs. $b_{low} = -.24$, $SE = 22$, $p = .275$. The simple slopes regarding minority identification showed the reverse pattern descriptively, but both slopes were not significant, $b_{low} = .34$, $SE = .21$, $p = .115$ vs. $b_{high} = -.08$, $SE = 24$, $p = .750$.

Minority and majority identification both interacted with minority members' own perception of ingroup prototypicality to predict *outgroup attitudes*, $\beta = .31$, $p = .025$ and, $\beta = .50$, $p = .005$, respectively. Analyses of the simple slopes, showed, however, that our

prediction that outgroup attitudes were more positive with higher attributed ingroup prototypicality only among high minority identifiers was only descriptively visible, b_{high} = .21, *SE* = .21, p = .312. Though not specifically predicted, the reverse relation held for low minority identifiers, b_{low} = -.41, *SE* = .24, p = .103. For majority identification, both simple slopes showed the reverse pattern, but were not significant, b_{low} = .06, *SE* = .25, p = .812, and b_{high} = -.10, *SE* = .23, p = .674. Moreover, majority identifiers' own prototypicality perceptions were unrelated to outgroup attitudes, thus not supporting our prediction for the merged minority that primarily their own perception would predict outgroup attitudes.

With respect to *ingroup attitudes*, minority identification and majority identification again both interacted with attributed ingroup prototypicality, β = .28, p = .074 and β = -.47, p = .021, respectively. Simple slopes analyses confirmed that, as expected, thinking the majority perceived high prototypicality of the ingroup increased ingroup attitudes only among high but not low minority identifiers, b_{high} = .638, *SE* = .22, p = .089 vs. b_{low} = -.01, *SE* = 25, p = .970. Simple slopes on majority identification showed a similar pattern, such that attributing higher ingroup prototypicality to the majority was related to more positive ingroup attitudes among low majority identifiers only, b_{low} = .52, *SE* = .25, p = .043, but to less positive ingroup attitudes among high majority identifiers, b_{high} = -.01, *SE* = .24, p = .956.

Taken together, we found partial support for our predictions that majority identifiers' own perception and minority identifiers' meta-perception would predict intergroup evaluations. In line with our hypotheses, high majority identifiers' own perception of lower ingroup prototypicality predicted more bias towards the majority. However, more positive outgroup attitudes as well as less positive ingroup attitudes were predicted not by their own- but their meta-perception of lower ingroup prototypicality. In contrast, high minority identifiers' ingroup attitudes were, as expected, predicted by their meta-perception of higher ingroup prototypicality only. At the same time, none of their prototypicality perceptions predicted outgroup attitudes or ingroup bias.

Additional Analyses

Socio-structural variables

We proceeded to examine whether the IPM's assumption that prototypicality perceptions are related to socio-structural aspects, also holds for a minority group. Thus, we also tested our regression model on the assessed socio-structural variables.

More *legitimacy* was perceived with meta-perceptions of higher relative ingroup prototypicality, β = .31, p = .020. The interaction of this effect with minority identification was not significant β = -.17, p = .260. With regard to the perception that the intergroup relation would change in the next years to come, both attributed ingroup prototypicaliy and majority identification were related to perceived *stability*, β = .24, p = .099 and β = -.28, p = .051, respectively. These effects were qualified by their interaction, β = .39, p = .077, and simple slopes analyses showed that higher stability was predicted by higher attributed ingroup prototypicality only among high majority identifiers, b_{high} = 1.04, SE = .29, p = .001 (vs. b_{low} = -.15, SE = .31, p = .620). *Permeability* was not predicted by any of the prototypicality variables or by identification. Higher *ingroup status* was also predicted by meta-perceptions of higher ingroup prototypicality, β = .29, p = .049, independent of minority members' identification. Further, there was an interaction of outgroup prototypicality with majority identification, β = .33, p = .068, but both simple slopes were not significant, $|t|$s ≤ 1.13, *ns*.

In sum, believing that the majority perceived higher prototypicality of the minority ingroup was overall related to higher perceived legitimacy and greater ingroup status, as well as to perceptions of higher stability among high majority identifiers.

Mediations by socio-structural variables

None of the socio-structural variables mediated the interactions between prototypicality perceptions and identification on intergroup outcomes.

Superordinate identification

We also examined whether minority members' superordinate identification would be predicted by their prototypicality representations. Indeed, independent of minority members' subgroup identification, stronger superordinate group identification was predicted by higher ingroup prototypicality, β = .22, p = .101, as well as by the belief that the majority perceived themselves (the majority) to be *less* prototypical, β = -.23, p = .080. From this analysis arose the suspicion that ingroup prototypicality acted as a suppressor variable in the prediction of superordinate identification by attributed outgroup prototypicality. We therefore conducted an indirect effects analysis using the MEDIATE syntax (Hayes & Preacher, 2011), which

confirmed that the effect of attributed outgroup prototypicality was fully accounted for by ingroup prototypicality, as can be seen in Figure 6 [10].

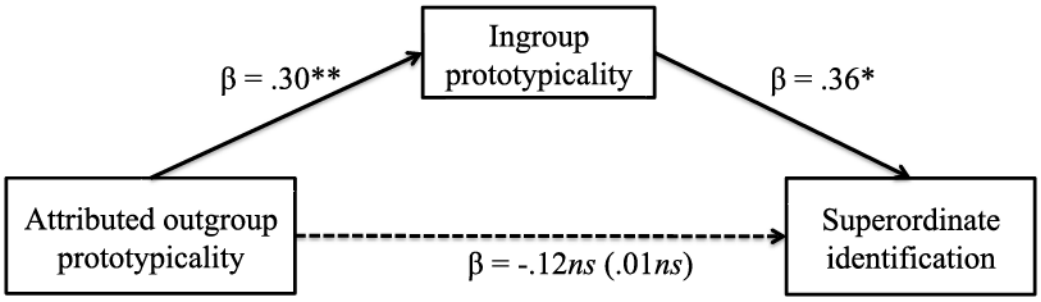

Figure 6. Indirect effect of attributed outgroup prototypicality on superordinate identification in the minority sample of Study 1.

3.1.3 Discussion

Overall, this first study provided some encouraging yet preliminary support of our hypotheses. First, the objective divergence hypothesis had put forward that minority and majority members would objectively differ in their own (relative) prototypicality perceptions. Accordingly, we found a tendency for the German majority to claim to be more relatively prototypical of Frankfurters, compared with what the Turkish minority thought. Such divergence has been previously found (e.g., Wenzel et al., 2004), and might have been attenuated in the present context by the fact that Frankfurt has advanced its multicultural side from a very early stage in Germany's history of immigration. Indeed, Frankfurt was one of the first towns in Germany to develop an infrastructure and policies for successful integration, generally resulting in a rather positive multicultural atmosphere today. As the comparable means regarding the perceived social structure (legitimacy, stability, and permeability) between majority and minority groups indicate, this context may have provided a rather conservative ground for the assessment of this first hypothesis.

Further, the study clearly confirmed our hypothesis that minority members subjectively perceive a perspective divergence, believing that the majority perceived much higher relative prototypicality of the Germans (due to much lower prototypicality of the Turks) than minority members themselves did. Subjectively perceiving such disagreement over the superordinate category may indicate that minority members experienced the inclusion of their

[10] Controlling for minority and majority identifications did not change the pattern of this indirect effect.

subgroup to be at stake. Conversely, though we also had expected majority members to subjectively perceive a disagreement between both groups, their own- and meta-perceptions did not differ significantly. In other words, majority members thought that minority members perceived high relative prototypicality of the Germans to the same extent as they themselves did.

To summarize, the finding that objective divergence was not very pronounced and subjective divergence visible among minority members but much less among majority members shows that despite the rather harmonious intergroup context, the minority still thought that their ingroup's position was not adequately recognized. Thus, arising divergence regarding the definition of the larger group may impact the minority first and / or more strongly, whose position is evidently more fragile and more likely to be at stake.

In the majority sample, the study replicated previous evidence that group members' own perceptions of relative prototypicality were related to intergroup evaluations, and that this link was especially pronounced for high dual identifiers. In further support of the IPM, results demonstrate that the outgroup is evaluated less positively with higher relative prototypicality due to the perception of being legitimately entitled to greater privilege. Importantly, the data showed for the first time that how the minority outgroup was believed to represent the superordinate category also impacted on majority members' outgroup evaluations. In line with the identity threat approach, making majority members attend to the minority's perspective (by asking them about it) was apparently sufficient to threaten their otherwise secured superior position within the larger group, whereby thinking that the minority perceived lower relative ingroup prototypicality predicted more negative outgroup attitudes.

However, the effect was considerably weaker than that of group members' own perception, and did not hold with respect to ingroup bias. Moreover, we did not find any mediations of this effect by defensive reactions such as legitimizing the status quo, reinforcing its stability, or closing up the perceived group boundaries. Interestingly, permeability was the only socio-structural variable that was significantly correlated with majority members' meta-perception. Specifically, it was the belief that the minority found themselves more prototypical that was related to the perception that the group boundaries were more permeable. Supported by the finding that increased ingroup prototypicality is the underlying process, we presume that this correlation rests on majority members' ingroup projection that the prototype of the superordinate group is set equal to the characteristics of the ingroup. In this sense, it is only a logic consequence that the more the minority is believed

to perceive themselves closer to the majority-defined prototype, the easier it will be for them to be regarded as a majority member.

This explanation is convergent with the idea that assimilationist thinking on behalf of the majority is related to greater perceived permeability (Verkuyten & Reijerse, 2008): given their almost egocentric assumption that greater minority prototypicality actually means greater closeness to a majority-defined prototype (the more I believe they find themselves prototypical, the more I will think that WE are the prototypical ones), individual mobility seems possible. In fact, this kind of thinking appears plausible in a context in which the majority perceives their position to be rather secured. In turn, in a different and more tense climate than the one investigated in this first study, believing that the outgroup claims prototypicality for themselves could also be interpreted in a much more threatening way. This belief could lead the majority to 'close up' and perceive much less permeable group boundaries in order to secure their superior position. To shed further light on both possibilities, the relation between attributed prototypicality perceptions and permeability will be explored in greater detail in Study 2.

It should further be noted that unlike for majority members' own perception, the effects of their meta-perception were independent of dual identification, which could have been expected based on SIT and related evidence (Bizman & Yinon, 2001; Tausch et al., 2007) that threats to one's social identity should especially affect the strongly identified. Yet, for example, Verkuyten (2009) found no moderating effect of national identification on the relation between threat and support for multiculturalism in three studies involving Dutch and Turkish-Dutch participants, but instead that the link between identification and minority rights was mediated by threat. The author argued that the absence of a moderating effect could be due to either the specific intergroup contexts, the type of dependent variable, or the type of threat measured. All of these explanations may also hold for the present study. For example, in Bizman and Yinon's (2001) study with Israelis, the moderating effect of identification on prejudice only held for *realistic* threat, such as job loss or crime, but not for *symbolic* threat that concerns one's values and belief system, the latter of which we would conceive to be reflected in low attributed relative prototypicality (cf. Stephan & Stephan, 1996). Interestingly, neither Shelton et al.'s (2006) model of threatened identities, nor any other theoretical accounts dealing with the role of the perceived outgroup's perspective have explicitly postulated social identification to be a moderating variable. Potentially, it can be inferred that thinking about the outgroup's perspective alone poses a threat sufficiently powerful to affect outgroup evaluations independent of identification. However, this

interpretation must remain preliminary. To be able to refute or corroborate this explanation, this moderation will be tested again in Study 2.

With regard to the minority, we would first like to state again that majority identification and superordinate identification yielded highly similar moderation effects, with only majority identification still showing the effects when the moderating effects of superordinate identification were controlled for. Possibly, the label 'Germans from Frankfurt' represented the more proximal group and was therefore more relevant group to minority members. Though 'Germans from Frankfurt' and 'Turks from Frankfurt' are technically defined on the same level of abstraction (i.e., as subgroups), we find it likely that this was not interpreted as such. Instead, minority members may have subjectively ignored the city reference by simply applying 'Turks' to their *ethnic* subgroup but 'German' to the *national* superordinate group. This may explain why this category became more relevant than the superordinate label 'Frankfurters'. Thus, while 'Frankfurters' was used as a reference category in terms of prototypicality, identification appears to be predominantly defined along the ethnic and national categories. Still, this issue needs further clarification and will be addressed more thoroughly in Study 2.

Our most central prediction for highly identified minority members was that believing that the majority perceives low ingroup prototypicality poses a threat to minority members' sense of inclusion and recognition. Accordingly, we had expected lower attributed ingroup prototypicality to negatively affect evaluations both regarding the outgroup and the ingroup. Yet, attributing lower ingroup prototypicality to the majority was only descriptively related to less positive outgroup attitudes, while the effect on ingroup attitudes was significant among those highly identified with the minority. This latter relation is much in line with evidence that negative meta-perceptions can be detrimental to people's feeling of self-worth (e.g., Vorauer & Kumhyr, 2001), and suggests that the threat of not being recognized or even excluded by the majority may bear negative consequences especially for the ingroup.

In contrast, among the more merged identifiers, meta-perceptions of higher ingroup prototypicality predicted *less* positive outgroup attitudes, indicating that less minority representation within the superordinate group is clearly not negative for these individuals, but may even be desirable. Put differently, in terms of the social identity threat account, attributing *high* (but not low) ingroup prototypicality to the majoirty is what may be interpreted as threatening to those hardly identified with the minority, possibly because of their wish to integrally belong to the larger group, rather than merely being seen and defined as a minority member. This may suggest an assimilative standpoint among minority members

with strong ties to the majority: when they saw ethnic minority elements of the superordinate group de-emphasized by majority members – which in turn implies an attributed more dominant representation of the majority within the larger group – they actually responded more *positively* towards the majority. However, this need not mean that majority identifiers prefer assimilation in the sense of abandoning their ethnic minority culture: Study 1 also showed that a relatively more positive evaluation (i.e. more ingroup bias or less outgroup bias) resulted from majority identifiers' own perception that they *as minority members* found the minority ingroup more prototypical. This supports the assumption that these minority members prefer to see both groups as prototypical.

As an indication that *both* minority and majority identifiers appeared to want the ingroup to be represented within the superordinate group at least to some extent, attachment to the superordinate group was predicted by higher ingroup prototypicality, independent of subgroup identification. Moreover, higher attributed outgroup prototypicality also predicted less superordinate identification, and mediation analyses showed that this was because it increased ingroup prototypicality. Independent of subgroup identification, thinking that the majority found themselves highly prototypical increased ingroup prototypicality - if they think they are prototypical, I will all the more think that we are prototypical, too -, which in turn predicted stronger superordinate identification. Apparently then, a defensive component resulting from attributing high outgroup prototypicality to the majority fuelled the relationship between ingroup prototypciality and superordinate identification. This mediational pattern highlights the relational aspect uncovered by meta-perceptions: in determining their subgroup's position in and emotional attachment to the superordinate group, subgroup members take into account both subgroups' perspectives, whereby in line with our prediction the ingroup's standpoint appears to be influenced by the one attributed to the outgroup.

The effects on the socio-structural variables were much in line with our assumption. First, lower attributed ingroup prototypicality was related to perceived ingroup status, indicating that low ingroup prototypicality is interpreted – equally among minority and majority identifiers – in terms of low ingroup status and power, in line with the idea that low ingroup prototypicality seen from the perspective of the majority means that the minority is pushed to the boundaries of the superordinate group and thereby increasingly loses status. However, status did not reliably mediate the effects on intergroup attitudes, so that no clear conclusions as to the potentially differential implications of perceiving higher ingroup status for high vs. low minority identifiers can be drawn. Second, corroborating the proposition that minorities

who think their ingroup is less recognized will tend to perceive less legitimacy and more stability (Verkuyten & Reijerse, 2008), both of these structural variables were predicted by meta-perceptions of lower (relative) ingroup prototypicality.

In sum, we found initial support for our prediction that minority members' level of identification with their ingroup vs. the majority outgroup moderates the direction in which own and attributed prototypicality perceptions are related to intergroup outcomes. At the same time, we could not corroborate the hypothesis that merged identifiers within the minority, i.e. those with a strong outgroup or majority identification, are predominantly guided by their own perceptions of the superordinate group rather than the perceived majority perspective. Instead, the effects of own- and meta-perceptions were generally moderated by *both* identification types, albeit in opposite directions. The way merged and separate identity patterns were operationalized in this study seem a likely explanation for this lack of a more specific differentiation of the role of own- versus meta-perceptions in merged versus separate identifiers. In particular, the results show that minority and majority identification had highly similar moderating effects, expectedly in opposite directions. At the same time, we could not interpret all of these interactions equally, as analyses of the respective simple slopes were not always significant and not always as expected. While the relatively large number of predictors relative to the sample size and/or the substantial intercorrelations between the predictors may have contributed to this partly inconclusive pattern of results, it also strongly calls for an operationalization using a single rather than two different measures of identification, an improvement that was made in the following Study 2.

As a potential further limitation of the interpretability of our results, we would like to remind the reader that, especially within the minority, the prototypicality variables were all significantly interrelated. Thus, own- and meta-perceptions at least partly overlapped – due to projection and inference processes – but they did so in a non-specific way, and this makes it difficult to interpret these intercorrelations. In other words, we cannot exclude the possibility that some participants did not (attempt to) always clearly differentiate between the four prototypicality perceptions. It could be that our participants who were approached in the street to fill out a questionnaire for 20 minutes may not have been as concentrated as participants in the lab. Moreover, though those Turkish participants who had chosen the German questionnaire version mastered the language well, some wordings, especially regarding the meta-perceptions, may still have been rather unfamiliar and unintuitive. In Study 2, measures were taken to improve this situation.

Finally, it should be noted that for minority members, the single prototypicality measures were much more informative than the relative quotient scores. Especially concerning highly identified minority members, it may not be so much about being more *relatively* prototypical. Instead, what counts is that the ingroup is perceived to be included, which need not necessarily imply that the outgroup's prototypicality has to decrease. The quotient measure may not be sensitive enough to capture this idea: an increase of one scale point of the nominator (i.e. ingroup prototypicality) is reflected in a change in the quotient score of only 0.2 if the denominator (i.e. outgroup prototypicality) remains constant. Therefore, to understand whether next to the single measures the relative aspect is also important to minority groups, a more direct measure of relative prototypicality that forces a change in unit of both ingroup and outgroup prototypicality might be more useful.

In conclusion, this first study not only replicated previous IPM findings (Wenzel et al., 2007), but extended the model's prediction to account for the threat that can be evoked by the representation of the superordinate group believed to be held by the outgroup (Shelton et al., 2006). While our predictions were generally supported, the pattern of results within the minority nevertheless stresses the need for an operationalization of a moderator that more clearly differentiates between the configurations of sub- and superordinate identities among minority members.

3.2 Study 2

The aim of Study 2 was to replicate and extend the findings of the first study in several ways. First, we aimed to operationalize the separate vs. merged identification pattern within ethnic minorities beyond the differentiation in Study 1 between more and less strong minority vs. majority / superordinate identification. Thereby, we also attempted to disentangle the confound of Study 1, namely between identification with the majority outgroup at the subgroup versus at the national superordinate level. As such, we adapted two direct measures of dual identification developed for a study with Turkish minority members in Germany (Simon & Ruhs, 2008).

On the background of their reasoning to capture minority members' dual identity *directly* due to its more complex constellation, Simon and Ruhs (2008) asked Turkish minority members in Germany to indicate the degree to which they felt Turkish *as opposed to German*. By choosing these labels, the authors circumvented the differentiation between *German* in terms of the subgroup versus the superordinate group. This speaks to the findings

of Study 1 where such clear distinction between majority outgroup and superordinate group identification did not prove valuable. Moreover, this measure seems well-suited to tap on minority members' different possible types of dual identities. Specifically, higher scores on this measure denote a more exclusive identification with the ethnic minority subgroup as opposed to the national superordinate group, and they may also indicate the sense of conflict with and / or distance between the two identities that has been described for separate identifiers. Conversely, scores around the scale midpoint indicate about equal identification with both levels. In the study by Simon and Ruhs, this measure was substantially related to subgroup identification (r = .50), confirming that subgroup attachment is stronger with higher separate identification. It should be noted that in contrast to traditional identification items that assess the degree or quantity of identification, this format allows for a qualitatively meaningful interpretation of different scores, with high scores indicating separate identification, scores around the midpoint indicating merged identification, and lower scores more exclusive identification with the majority or larger group as opposed to the minority.

Moreover, separate identification in the Simon and Ruhs' (2008) study was negatively related to a two-item scale of 'dual' or simultaneous identification with the Turks and the Germans (e.g. "I feel I belong to both the Turks and the Germans."). We employed a modified version of this scale in Study 2 that more specifically assessed simultaneous identification with *both subgroups* in order to control for the possibility that minorities' dual identity is concerned with the minority identity and the majority as a specific subgroup rather than as a superordinate group, a question that was left open from Study 1. In sum, we employed two different measures of the dual identity pattern within the minority as potential moderating variables, with one referring more to separate vs. merged identities, and the second tapping on simultaneous subgroup identification.

A second goal of Study 2 was to examine whether the effects of own- and meta-perceptions of (relative) prototypicality can be extended to a broader set of dependent variables, namely group-based emotions, as well as religious and political aspects, next to intergroup attitudes.

Further, we opted for a different measure of relative prototypicality in Study 2 that operationalized the concept in a direct forced-choice format, in addition to the assessment of the single measures. This would allow to examine more closely and more directly the relative component of relative prototypicality, especially with respect to minority members.

Finally, in Study 1 we could not rule out the possibility that participants had been somewhat distracted while filling out our questionnaire. Therefore, in Study 2, we took

caution to ensure participants' attentiveness by improving the presentation of the items and by choosing an online-questionnaire format rather than approaching people in the streets.

Study Contexts

We again investigated our hypotheses in the intergroup relation between Turks (people with Turkish origins) and Germans, but using a broader array of superordinate categories. The first subsample comprised Turks and Germans within Germany. Data of the second subsample were collected in the context of 14 large German towns with a substantial Turkish migrant population, whereby each town represented the superordinate group for its respective residents, similar to the setting of Study 1. The criteria for including a town were a total of at least 500,000 inhabitants with a Turkish population of at least 3% (n = 10), or a total of at least 250,000 inhabitants with a Turkish population of at least 6% (n = 4). This selection allowed us to represent the two contexts in which the Turkish-German relationship is of great importance: the large towns with a percentage of Turks equal to the Turkish population within Germany, as well as those middle-sized towns in which the Turkish minority is very visible, often associated with greater intergroup tensions.

3.2.1 Method

Participants and Design

We only included participants whose data recordings indicated that they had carefully read all the instructions and questions (i.e. worked on the questionnaire for at least five minutes), and had consistently (i.e., without interruptions and distractions) participated in the study (Reips, 2002), leading to a sample of N = 344 residents in Germany with German or Turkish background, of which n = 229 (66.81% females, 33.19% males) had German background and categorized themselves as Germans, and n = 99 (60.61% females, 38.38% males, one participant did not indicate their gender) had Turkish background and self-categorized as Turks. Background and self-categorization of the remaining 16 participants did not match, and they were therefore excluded from analyses. Respondents' mean age was M = 24.74 (SD = 6.39), ranging from 17 to 62, with participants of the Turkish sample (M = 26.01, SD = 7.45) being older than German participants (M = 24.21, SD = 5.55). Participants were recruited via two large web-based social networks (StudiVZ, the largest German social network for students, and facebook), and via email announcement using a snowball

procedure. To facilitate recruitment, participants were offered a raffle ticket in which five participants could win 50 Euros.

Procedure

A brief introduction stated that the study was about the image that members of groups with divergent backgrounds had with respect to their superordinate group. Next, to be able to direct them to the questionnaire that matched their superordinate group, participants were asked to choose from a list whether or not they lived in one of 14 major German towns. Participants were then directed to the respective questionnaire version, and it was specified that the study concerned Germans' and Turks' image of the hometown participants had selected or, in case none of the 14 towns applied, Germany. Respondents then indicated their background (German vs. Turkish), but assignment to the majority (Germans as ingroup) vs. minority (Turks as ingroup) version of the questionnaire depended on respondents' self-categorization as 'Turk from hometown' / 'Turk from Germany' or 'German from hometown' / 'German from Germany'. Respondents then completed our measures before providing demographic information. Finally, they were thanked, fully debriefed and could participate in the lottery that had been announced in the beginning.

Measures

Unless stated otherwise, responses were made on 7-point scales ranging from 1 (completely disagree) to 7 (completely agree).

Identification measures

Subgroup identification. Identification with the subgroup was measured with two items, namely 'I am glad to be a Turk / German (in hometown)', and 'To be a Turk / German (in hometown) is an important part of who I am', $\alpha_{maj} = .81$, $\alpha_{min} = .81$.

Superordinate group identification. Three items assessed superordinate group identification, whereby the superordinate group label referred to the respondent's hometown, e.g. 'Berliner' or 'Münchener' for someone from Berlin or Munich, or to 'WE in Germany' for respondents whose superordinate group was Germany. The items were 'I am glad to be [superordinate group label]', 'To be [superordinate group label] is an important part of who I am', and 'I am proud of [hometown / Germany]', $\alpha_{maj} = .92$, $\alpha_{min} = .88$.

Principal components analyses with oblimin rotation on superordinate and subgroup identification items within each subgroup yielded a clear one-factor solution for the majority,

with all superordinate and subgroup identification items loading exclusively on a 'dual identification' factor (all loadings ≥ .89) that explained 67.37% of the total common variance. The analysis for the minority yielded a solution with two factors, whereby the first factor explained 61.37% of the total common variance and comprised superordinate category identification items, while the items for subgroup identification loaded on the second factor (all loadings ≥ .92), which explained 21.19% of the total common variance. As expected, the differential factor solutions confirm that while dual identification should be interpreted in terms of both sub- and superordinate group identification for the majority, both identities should not be treated as one among minority members. We therefore created a dual identification scale only for the majority ($\alpha = .88$).

Separate identification. Following Simon and Ruhs (2008), we assessed separate identification by asking minority participants to indicate the degree to which they mostly felt as Turkish as opposed to German by clicking on a horizontal line. Response choices were written at the extremes above the line, ranging from 0 '100% Turkish & 0% German' to 10 '0% Turkish & 100% German'. Scores were reverse coded, so that higher scores indicated higher separate identification as Turkish.

Simultaneous identification. Two items measured simultaneous identification, namely 'I feel a sense of belonging to both the Germans in [hometown / Germany] and the Turks in [hometown / Germany].', and 'Sometimes I feel more as a German in [hometown / Germany] and sometimes more as a Turk in [hometown / Germany] – it depends on the situation.', $\alpha_{min} = .72$.

Prototypicality measures

Relative prototypicality. Using a new forced-choice format, participants were instructed to indicate who, in their opinion, was more typical for the superordinate group. Answers ranged from 0 'the Turks' to 50 'the Germans'.[11]

[11] These measures of (attributed) relative prototypicality were in the focus of our analyses, especially regarding the majority sample. We would, however, like to note that even though we expected this and the quotient index to equally capture the concept of relative prototypicality, the correlations were only moderately high in the case for participants' own perceptions ($r_{maj} = .39$, $p < .001$ $r_{min} = .44$, $p < .001$), and their meta-perceptions were weakly or not at all related ($r_{maj} = .19$, $p = .004$ $r_{min} = .09$, *ns*). Further, the pattern of correlations with the single measures was different from and not as straightforward as in Study 1 (the single own perceptions were not exclusively related to majority members' quotient score, but also to the quotient of the meta-perceptions, and correspondingly, the single meta-perceptions were also related to the quotient of majority members' own

Attributed relative prototypicality. The same item as for the relative prototypicality measure was used, except that the instruction differed: participants were made aware that for this question, they were asked to indicate what they believed their outgroup thought. Specifically, they were asked to indicate who in their perceived outgroup's perspective was more typical for the superordinate group.

Perceptions of ingroup and outgroup prototypicality. We also assessed participants' own- and meta-perceptions of ingroup and outgroup prototypicality using the separate single-item measures used in Study 1, on which participants were asked to separately rate both subgroups' typicality for the superordinate group.

Intergroup attitudes

For the sake of comparison, we used the same items as in Study 1 to assess intergroup attitudes. However, due to their rather low / variable reliabilities in the first two studies and to examine a broader array of attitudes, further measures of intergroup attitudes were employed.

Attitudes towards the majority. The same three items as used in Study 1 assessed group members' attitudes towards the majority, albeit with different labels for the subgroup, namely 'the Germans from [hometown]' or 'the Germans'. Scale reliabilities were rather low for the majority, $\alpha_{maj} = .49$, $\alpha_{min} = .63$. Removing the reverse-coded item 'It would be nicer to have less Germans in [hometown /Germany]' improved reliability for majority members to $\alpha_{maj} = .61$, but because both scales yielded highly similar results, we decided to compute a three-item scale across subgroups.

Attitudes towards the minority. Attitudes towards the Turks were assessed with the three corresponding items used for the majority, with 'the Turks in [hometown]' or 'the Turks' being the subgroup labels. We included two additional items for measuring attitudes towards the Turks only, namely 'If I had enough money, I would spend it for organizations that campaign for joint community activities between the Germans and the Turks', and 'The Turks (in hometown) greatly enrich Germany', $\alpha_{maj} = .77$, $\alpha_{min} = .73$.

Cultural similarities. Four items, taken from the Pettigrew and Meertens (1995) prejudice scale measured the degree to which respondents perceived cultural differences between

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perceptions). Thus, the interpretation of the quotient scores seems not comparable across both studies. We therefore opted to only conduct our analyses using the forced-choice format of (attributed) relative prototypicality, and did not use the quotient scores.

ingroup and outgroup with respect to honesty, the values transmitted to one's children, diligence, and the role of women, $\alpha_{maj} = .80$, $\alpha_{min} = .69$.

Ingroup bias. Two separate 'feeling thermometers' assessed how cold or warm participants felt towards the Germans and the Turks. Responses were scaled from 0 ('very cold') to 50 ('very warm').

Outgroup friends. We asked participants to indicate, on one item, how many outgroup friends they had, with answers ranging from 1 'none' to 7 'many'.

Religiousness. Two items assessed the extent to which participants considered themselves to be religious, with responses ranging from 1 'not at all' to 7 'very much', and how often they engaged in prayers, with responses ranging from 1 'never' to 7 'every day', $\alpha_{maj} = .88$, $\alpha_{min} = .71$.

Political orientation. We also asked participants to classify themselves according to their political orientation on a scale from 1 'left' to 7 'conservative, with the scale midpoint being labeled 4 'middle'.

Intergroup emotions. Ingroup- and outgroup-directed emotions were assessed by having participants indicate separately the extent to which they felt 'angry' towards, 'bothered' by and 'annoyed' by the ingroup and the outgroup, as well as the degree to which they 'liked' (reverse-coded) and 'trusted' (reverse-coded) them. Within both subsamples, factor analyses using oblimin rotation confirmed that the five respective items for ingroup- and outgroup-directed emotions loaded on separate factors in both majority and minority subsamples (see Appendix C for the pattern matrices). Accordingly, we computed separate scales for ingroup emotions, $\alpha_{maj} = .77$, $\alpha_{min} = .84$, and outgroup emotions, $\alpha_{maj} = .90$, $\alpha_{min} = .68$, such that higher scores indicate more negative emotions.

Integration beliefs. Group members' beliefs regarding the development of the Turks' integration and the chances for equal opportunities in the near future were measured with four items, namely 'In my opinion, Turkish social climbers will soon no longer constitute an exception.', 'In my opinion, there are good chances that the Turks and the Germans will be economically and socially on equal terms soon.', 'In my opinion, with respect to one's chances it will still make a big difference in the near future whether one has a Turkish or a German background' (reverse coded), and 'In my opinion, we live in a permeable society: everyone can get to the top, even the Turks.', $\alpha_{maj} = .73$, $\alpha_{min} = .56$.

Socio-structural variables. Perceived legitimacy of status differences was assessed with two items ('In my opinion, it is unfair that the Turks in [hometown / Germany] are worse off than the Germans in [hometown / Germany]', and 'In my opinion, it is really unfair that the

Turks in [hometown / Germany] do not have the same opportunities as the Germans in [hometown / Germany]', α_{maj} = .87, α_{min} = .77. The two items measuring *perceived stability* of status differences were 'In my opinion, the relation between the Turks and the Germans in [hometown / Germany] won't change so quickly', and 'In my opinion, it will be long before the Turks in [hometown / Germany] will have equal opportunities as the Germans in [hometown / Germany].', α_{maj} = .53, α_{min} = .61. We assessed *perceived permeability* using two items, namely 'In my opinion, it is almost impossible for Turks in [hometown / Germany] to be regarded as Germans in [hometown / Germany].', and 'In my opinion, the Turks in [hometown / Germany] can easily be seen as Germans in [hometown / Germany], if they want.', α_{maj} = .72, α_{min} = .60. Finally, one item measured which group was perceived to have higher status, with responses ranging from 1 ('the Turks have the better standing') to 7('the Germans have the better standing').

3.2.2 Results

Preliminary Analyses

Study context: Germany vs. town in Germany

Preliminary regression analyses confirmed that study context did not significantly affect or interact with own- or meta-perceptions of prototypicality on any of the (main) dependent variables, and was therefore not included as covariate in the main analyses. Further, order of administration of the prototypicality measures did not affect any of the analyses and was therefore omitted from all analyses. Likewise, no socio-demographic variables systematically influenced the results so that all analyses were conducted without the inclusion of any covariates.

Minority identification patterns

In order to extract the proposed two subgroups of separate and merged identifiers within the minority, we classified minority participants according to their score on the separatist identification item. Specifically, based on a median-split analysis, participants who had indicated to feel at least 80% Turkish (and at most 20% German) were categorized as 'separate identifiers' (N = 53), and those who indicated almost equal attachment to both groups, at most 70% Turkish and at least 30% German were categorized as 'merged identifiers' (N = 46; in fact, only n = 5 participants indicated to feel rather exclusively, i.e.

80% or more German).[12] As expected, a 2 (identity pattern: separate vs. merged) x 3 (identification: subgroup vs. simultaneous vs. superordinate group) MANOVA revealed that the two minority groups differed with respect to subgroup and simultaneous identifications, but did not differ in their level of identification with the superordinate group. Moreover, while within separate identifiers, subgroup identification was highest, simultaneous identification was highest within merged identifiers. Means and significant differences are depicted in Table 7.

Table 5. Means (and standard deviations) of subgroup, simultaneous, and superordinate group identification between separate and merged identifiers in Study 2.

	Separate Min		Merged Min				
	Mean	SD	Mean	SD	*F*	*p*	η^2
Subgroup ID	5.67_a	(1.71)	4.62_b	(1.77)	9.02	.003	.09
Simultaneous ID	4.04_c	(1.89)	5.60_a	(1.52)	20.10	.000	.17
Superordinate ID	4.69_b	(1.77)	4.63_b	(1.54)	0.03	.856	.00

Note: ID = identification, Min = minority; significant mean differences ($ps < .01$) are indicated by different subscripts.

Means and correlations

For all three subsamples, the means of and correlations between all variables are presented in Table 6 and Tables 7a/7b, respectively.

Within the majority, a closer look at the correlations reveals that, as expected on the bases of SIT and the IPM, the intergroup outcome variables (attitudes, prejudice, and bias) were moderately to strongly related to intergroup emotions and the socio-structural variables (perceived legitimacy, stability, and permeability). Regarding the expected positive correlations between their onw- and meta-perceptions of prototypicality, the present study shows a rather differentiated pattern of projection at the specific category level (Judd et al., 2005): "The more I perceive us Germans to be prototypical, the more I believe that the Turks will also find the Germans more prototypical". Thus, own- and meta-perceptions of ingroup prototypicality were as expected moderately correlated, as were those of outgroup prototypicality and those of relative ingroup prototypicality.

[12] A cluster analysis yielded two groups largely convergent with those obtained using a median split. Furthermore, we also conducted all our main analyses using the separate identification item as continuous moderator in order to verify that the results were highly similar to the median-split procedure.

A comparative inspection of the correlations within the separately vs. mergedly identified minority shows both similarities and important differences between these two groups, as well as striking contrasts to the majority sample. First, in line with the findings of Study 1, ingroup and outgroup attitudes were unrelated in the majority and the separate minority samples, but quite substantially related among the mergedly identified minority, corroborating the conceptualization of their intertwined identities. Again as in Study 1, within the minority samples, and different from the majority, the main dependent variables of interest were generally unrelated to the socio-structural variables. However, there are three notable exceptions, namely that among merged identifiers greater perceived legitimacy was related to more positive outgroup emotions, and higher perceived ingroup status to more positive ingroup emotions. Among separate identifiers, greater perceived stability was correlated with more negative outgroup emotions. In sum, this suggests that differential socio-structural aspects might be of importance for separate vs. merged identifiers.

Furthermore, with respect to merged and separate minority members' prototypicality perceptions, there were two correlational differences to point out. First, while attributed outgroup prototypicality positively correlated with ingroup prototypicality among the separately identified, indicating that, as expected, the more they thought their ingroup (the minority) was prototypical, the more they believed that the majority likewise found *their* ingroup (the majority) prototypical, no such projection at the target level (e.g., Judd et al., 2005) was apparent in the merged minority. Second, only among merged but not separate identifiers was higher outgroup prototypicality correlated with higher relative outgroup prototypicality as well as with the belief that the majority likewise perceived higher relative outgroup prototypicality. Together, these differential correlational patterns indicate that separate minority members contrasted the view attributed to the majority to their own, while merged minority members engaged more in assimilating projection processes in terms of "what they think about us is what I think".

Interestingly, the dependent variable religiousness was almost exclusively unrelated to any variable in the majority sample (with the exception of higher religiousness being related to a more conservative political orientation). Conversely, religiousness was significantly interrelated with ingroup bias, intergroup emotions, political orientation, and outgroup attitudes (only merged identifiers) within both minority samples. Interestingly, the number of outgroup friends was unrelated to relevant outcomes among merged identifiers, but related to several intergoup outcome variables among the separate identifiers.

Table 6. Means and standard deviations of all variables for the majority and the two minority samples in Study 2.

	Majority (N=229)		Separate Minority (N=53)		Merged Minority (N=46)	
	Mean	SD	Mean	SD	Mean	SD
own-Prot. IG	4.83	(1.50)	3.87	(1.56)	3.76	(1.34)
own-Prot. OG	3.12	(1.62)	5.11	(1.63)	4.76	(1.40)
meta-Prot. IG	4.79	(1.48)	3.52	(1.96)	3.35	(1.89)
meta-Prot. OG	3.76	(1.59)	4.55	(2.13)	4.83	(1.98)
own-RP	35.25	(11.50)	20.74	(10.97)	20.43	(12.66)
meta-RP	29.72	(13.29)	14.93	(12.94)	15.97	(14.17)
ingroup attitudes	5.37	(0.83)	5.05	(1.14)	4.31	(1.28)
outgroup attitudes	3.88	(1.27)	5.31	(0.99)	5.50	(1.25)
cultural similarities	3.12	(1.21)	3.53	(1.30)	3.27	(1.18)
Ingroup bias	10.68	(14.57)	15.64	(18.75)	3.93	(14.83)
Outgroup friends	2.47	(1.40)	4.58	(1.80)	5.52	(1.37)
religiousness	2.21	(1.56)	4.93	(1.74)	4.25	(1.74)
Political orientation	3.59	(1.30)	3.68	(1.62)	3.82	(1.42)
Ingroup emotions	3.06	(1.06)	2.95	(1.41)	3.40	(1.53)
Outgroup emotions	4.21	(1.69)	3.16	(1.05)	3.17	(1.29)
Integration chances	3.55	(1.11)	4.83	(0.99)	4.61	(1.09)
Legitimacy	3.01	(1.66)	1.66	(1.59)	1.79	(1.68)
Stability	4.80	(1.16)	4.33	(1.32)	4.43	(1.29)
Permeability	4.20	(1.25)	2.80	(1.57)	2.97	(1.69)
Ingroup status	5.11	(1.28)	5.67	(1.39)	5.41	(1.17)

Note: own-Prot. IG = own perception of ingroup prototypicality; own-Prot. OG = own perception of outgroup prototypicality; meta-Prot. IG = meta-perception of ingroup prototypicality; meta -Prot. OG = meta-perception of outgroup prototypicality; own-RP = own perception of relative ingroup prototypicality; meta-RP = meta-perception of relative ingroup prototypicality;

Table 7a. *Correlations of all variables for the majority sample in Study 2.*

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	own-Prot. IG	.21**	.28**	.03	.32**	.05	.18**	-.06	.06	.09	-.01	.05	.04	-.10	.10	-.04	.00	.11	-.05	.15*	.25**
2	own-Prot. OG		.11	.35**	-.29**	-.12	-.04	.42**	.41**	-.42**	.13*	-.01	-.13	.03	-.38**	.41**	-.35**	-.13*	.12	.00	-.02
3	meta-Prot. IG			.05	.26**	.20**	.05	.23**	.17**	-.13*	-.01	.12	-.03	-.06	-.20**	.18**	-.17*	.00	.04	.12	.14*
4	meta-Prot. OG				-.30**	-.28**	-.04	.10	.17*	-.15*	.04	.07	.01	.08	-.08	.21**	-.05	-.20**	.15*	-.19**	-.04
5	own-RP					.46**	.26**	-.11	-.11	.29**	-.19**	.07	.10	-.24**	.12	-.15*	.15*	.10	-.11	.23**	.29**
6	meta-RP						.05	.19**	.09	-.07	-.09	.00	-.21**	-.11	-.23**	.15*	-.07	-.08	-.03	.21**	.06
7	IG attitudes							-.07	-.01	.37**	-.08	.02	.10	-.60**	.08	-.01	.08	-.05	.15*	.10	.33**
8	OG attitudes								.64**	-.70**	.31**	.03	-.41**	.05	-.79**	.61**	-.63**	-.29**	.26**	.14*	-.10
9	Cult. Sim.									-.52**	.12	-.06	-.26**	-.02	-.61**	.63**	-.49**	-.30**	.27**	.06	-.05
10	IG bias										-.39**	-.01	.35**	-.32**	.73**	-.50**	.50**	.29**	-.22**	.02	.23**
11	OGfriends											.23**	-.03	.14*	-.31**	.14*	-.14*	-.15*	.15*	-.13*	-.06
12	Religiousness												.16*	.05	.03	.03	.12	-.05	.06	-.13	.06
13	Polit. orient.													-.18**	.31**	-.30**	.42**	.09	.08	-.07	.22**
14	OG emotions														.07	-.10	-.14*	.06	-.15*	-.11	-.22**
15	OGemotions															-.61**	.52**	.34**	-.33**	-.06	.11
16	Integration ch.																-.46**	-.46**	.40**	-.05	-.12
17	Legitimacy																	.13	-.02	-.14*	.11
18	Stability																		-.40**	.18**	.08
19	Permeability																			-.17**	.06
20	IG status																				.06
21	Dual ID																				

Note: * p < .05, ** p < .01; own-Prot. = own perception of prototypicality, meta-Prot. = meta-perception of prototypicality, IG = Ingroup, OG = Outgroup, own-RP = own perception of relative ingroup prototypicality; meta-RP = meta-perception of relative ingroup prototypicality, Cult. Sim. = Cultural similarities, Polit. Orient. = Political orientation, Integ. = Integration, ID = Identification.

Table 7b. Correlations of all variables for the separate and merged minority subsamples in Study 2.

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	own-Prot. IG		.35*	.33*	.35**	.21	-.09	.28*	.25	.14	.07	-.19	.10	.06	-.06	-.22	.19	-.02	.04	.11	.02	-.18
2	own-Prot. OG	.31*		.23	.07	-.10	.10	.23	.03	.10	.07	-.26	.23	.13	-.15	-.08	-.09	-.23	.08	-.13	-.01	.05
3	meta-Prot. IG	.33*	.18		-.08	.03	.09	-.02	.30*	.08	-.28*	.16	-.11	-.07	.14	-.17	.05	-.08	.03	.04	-.13	.06
4	meta-Prot. OG	-.02	.00	-.29*		.11	-.08	.01	.27*	.04	-.03	.04	.08	-.15	.02	-.23	.03	-.27*	.06	-.08	-.24	-.37**
5	own-RP	.27	-.48**	.21	.13		-.52**	-.09	.19	.18	-.09	.19	-.10	-.09	.40**	-.11	-.16	.30*	-.18	.05	.03	.12
6	meta-RP	.12	-.32*	.52**	-.13	-.36*		-.23	-.17	-.16	-.13	.15	.01	-.00	.31*	.03	-.22	.09	-.19	-.20	.27*	.36**
7	IG attitudes	.50**	.23	-.04	-.05	-.01	-.23		.20	-.05	.38**	-.08	.09	.02	-.32*	-.13	.25	-.27	.21	.11	-.04	-.11
8	OG attitudes	.30*	.47**	-.08	-.02	-.45**	-.43**	.54**		.27	-.31*	.23	-.05	-.08	.07	-.51**	.09	-.03	-.04	.18	-.10	-.28*
9	Cult. Sim.	-.15	-.10	.04	-.02	.04	.18	.22	-.16		-.23	.05	.08	-.05	-.04	-.23	.27	.00	-.06	-.01	-.27*	-.22
10	IG bias	.21	-.06	-.05	-.03	.07	.18	.29*	-.17	.19		-.32*	.29*	-.03	-.47**	.43**	.15	-.20	.04	.00	.07	.04
11	OGfriends	.06	-.19	.15	-.01	.06	-.06	.17	.08	-.09	-.15		-.27	-.27*	.35*	-.24	.08	.14	.01	.27	-.04	-.07
12	Religiousness	.02	-.37*	.08	-.08	.40**	.31*	.07	-.43**	.17	.43**	-.10		.29*	-.33*	.36**	.05	-.23	.16	-.09	-.08	.09
13	Polit. orient.	.01	-.32*	.03	-.14	.32*	.38**	-.09	-.50**	.15	.53**	-.02	.54**		-.16	.15	-.13	.12	.09	-.02	.28*	.04
14	OG emotions	-.33*	-.04	.01	.10	-.04	-.04	-.60**	-.17	-.12	-.46**	-.01	-.26	-.10		-.06	-.22	.23	-.06	.02	-.16	.06
15	OGemotions	-.19	-.44**	-.07	.04	.28	.33*	-.48**	-.64**	-.08	.30*	-.21	.36*	.43**	.19		-.13	-.15	.32*	-.14	-.10	.16
16	Integ. chances	.16	.13	-.13	-.17	-.07	-.24	.37*	.23	.07	.28	-.01	.32*	.00	-.38*	-.13		-.07	-.05	.20	.15	-.02
17	Legitimacy	-.17	.03	-.05	.24	.01	-.09	.03	.01	.03	-.21	.11	-.13	-.09	.13	-.34*	-.18		-.43**	.19	.19	.13
18	Stability	.07	-.10	.16	.10	.26	.22	-.20	-.09	.03	-.13	-.01	.08	-.05	.28	.10	-.22	-.21		-.18	-.20	-.01
19	Permeability	.15	.18	-.01	.09	-.10	-.02	.24	.14	-.05	.02	.13	.02	.08	.03	-.25	-.04	.26	-.30*		.15	-.14
20	IG status	.21	.22	-.05	.14	.02	.31*	.16	-.02	.05	.19	-.24	-.01	.05	-.38**	-.11	.07	.06	-.09	.15		-.20
21	Simult. ID	.27	.23	-.06	.02	.04	-.45**	.37*	.50**	-.27	-.19	.18	-.06	-.15	-.08	-.54**	.18	.11	-.22	.25	.20	

Note: Correlations in the upper half of the matrix refer to the separate minority, those in the lower half to the merged minority, * $p < .05$, ** $p < .01$; own-Prot. = own perception of prototypicality, meta-Prot. = meta-perception of prototypicality, IG = Ingroup, OG = Outgroup, own-RP = own perception of relative ingroup prototypicality; meta-RP = meta-perception of relative ingroup prototypicality, Cult. Sim. = Cultural similarities, Polit. Orient. = Political orientation, Integ. = Integration, Simult. ID = Simultaneous identification.

Main Analyses

Objective and subjective perspective divergence

Before we tested our main hypotheses, we examined whether or not minority and majority members indeed perceived the majority (i.e., the Germans) to be significantly more relatively prototypical using a series of separate t-tests on the relative (meta-) prototypicality measures. As can be seen in Figure 7, all scores differed significantly from the scale midpoint, all *t*s $\geq$ 5.38 all *p*s $<$ .001, indicating that across status groups and perspectives, group members themselves perceived and also believed that their outgroup perceived the Germans (majority) to be relatively more prototypical for the superordinate group than the Turks (minority).

To test whether the groups differed in their perceptions of the Germans' relative prototypicality (objective divergence), and whether group members also subjectively perceived than ingroup and outgroup had divergent perceptions (subjective divergence), we computed a 2 (status: majority vs. minority) x 2 (perspective: own vs. meta) mixed-model ANOVA with repeated measures on the second factor on the relative prototypicality measures[13]. The analysis expectedly only yielded the interaction effect, $F(1,326) = 45.62$, $p < .001$, $\eta_p^2 = .12$. As depicted in Figure 8, pairwise comparisons confirmed that the majority viewed their group as relatively more prototypical compared with the minority, $F(1, 326) = 7.52$, $p = .006$, $\eta_p^2 = .02$. Furthermore, and in line with our second hypothesis, relative to their own perception, the minority believed that the majority perceived much higher relative prototypicality of the Germans, $F(1,326) = 15.01$, $p < .001$, $\eta_p^2 = .04$. Unlike the pattern of Study 1, the majority attributed much lower relative prototypicality of the Germans to the minority compared with their own perception, $F(1,326) = 40.98$, $p < .001$, $\eta_p^2 = .11$.

[13] The same analysis using the quotient scores of the single (meta-)prototypicality measures yielded highly similar results.

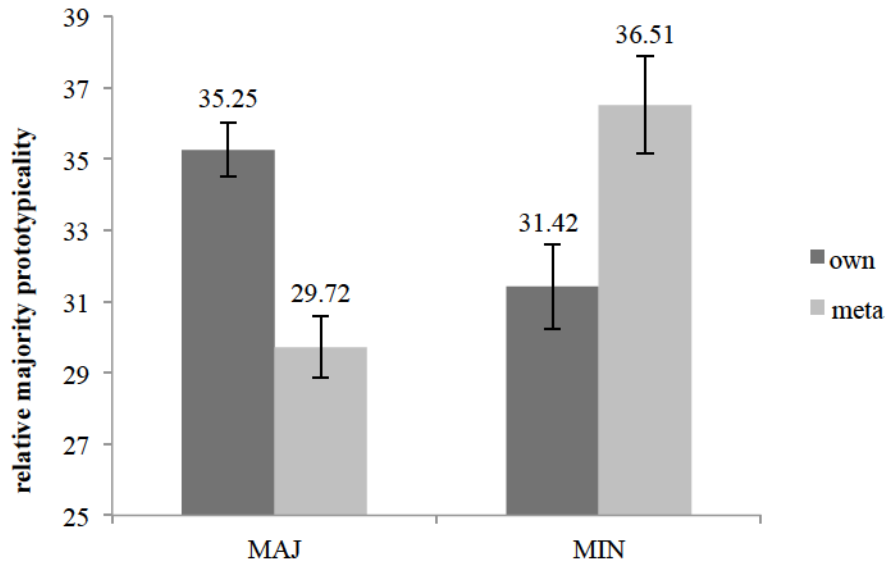

Figure 7. Means of own- and meta-perceptions of relative protoypicality of the Germans between majority and minority participants in Study 2.

Note: Scores greater than 25 indicate higher relative prototypicality of the Germans. All means significantly differed from each other, all *p*s < .01, and from the scale midpoint, all *p*s < .001. Bars indicate standard errors.

As in Study 1, to examine in more detail the contributions of the single prototypicality scores, i.e. whether group members perceived objective and subjective divergence due to the prototypicality of the Germans, of the Turks, or both, we also tested our assumptions using a 2 (status: majority vs. minority) x 2 (target: Germans vs. Turks) x 2 (perspective: own vs. meta) mixed-model ANOVA on the single prototypicality scores. This analysis yielded a main effect of target, $F(1, 326) = 163.46$, $p < .001$, $\eta_p^2 = .33$ and a status by perspective interaction, $F(1, 326) = 14.30$, $p < .001$, $\eta_p^2 = .04$. Both were, as expected, qualified by the three way interaction, $F(1, 326) = 5.42$, $p = .021$, $\eta_p^2 = .02$. The pattern of this interaction is displayed Table 8. Pairwise comparisons confirmed that, overall, the Germans were perceived to be more prototypical than the Turks, from all perspectives and across status groups, Fs ≥ 25.68, ps < .001. While majority and minority did not disagree with respect to the prototypicality of the Germans, we found evidence for an objective perspective divergence regarding the Turks' prototypicality. Specifically and as expected, the majority perceived significantly less prototypicality of the Turks, relative to the minority, $F(1, 326) = 13.66$, $p < .001$, $\eta_p^2 = .04$. Moreover, with respect to our subjective divergence hypothesis, minority members' own perception of ingroup prototypicality was higher than the perception they attributed to the majority, $F(1, 326) = 3.96$, $p = .047$, $\eta_p^2 = .01$, replicating the pattern found in Study 1. Unlike Study 1, but in line with our subjective divergence hypothesis,

majority members thought that the minority perceived the Turks to be more prototypical than they (the majority) themselves did, $F(1, 326) = 26.27$, $p < .001$, $\eta_p^2 = .08$. In sum, this analysis indicates that for both majority and minority members, the objective fact as well as group members' subjective belief that both groups diverged regarding their superordinate group representations concerned not the majority Germans, but only the minority Turks.

Table 8. Means (and standard deviations) of the single own and attributed prototypicality scores for majority and minority members in Study 2.

	Own perception				Meta-perception			
	Prot. Maj		Prot. Min		Prot. Maj		Prot. Min	
Majority	4.83_a	(1.50)	3.12_b	(1.62)	4.79_a	(1.48)	3.76_c	(1.59)
Minority	4.95_a	(1.67)	3.82_c	(1.45)	4.68_a	(2.05)	3.44_d	(1.92)

Note: Significant mean differences ($ps < .05$) are indicated by different subscripts.

Prediction of intergroup outcomes - Majority

Separate multiple regression analyses were conducted on the dependent variables, entering the relative prototypicality scores (own- and meta-perception) and dual identification in a first step, and the two interactions of (attributed) relative prototypicality with identification in a second step.[14] The main effects of the relative prototypicality perceptions are summarized in Table 9, the complete regression results can be found in Table C2 of the Appendix.

Intergroup attitudes, ingroup bias, cultural similarities, political orientation. As can be seen in Table 9, majority members' own perceptions of relative prototypicality significantly predicted all of these dependent variables, and this effect was expectedly always qualified by

[14] To test whether the *relative* prototypicality measures (own and meta) had explanatory value over and above the single measures, we also conducted regression analyses in which the contributions of both the relative and the single prototypicality indices were analyzed together. The effects of the relative measures typically remained when controlling for the single prototypicality measures, with outgroup prototypicality being the strongest predictor. Moreover, stepwise inclusion of own and attributed relative prototypicality significantly improved the regressions (only marginally for cultural similarities and integration beliefs, and not for perceived legitimacy). F-changes ranged between F(2,222) = 2.46 to 10.78, all ps < .088. Thus, even when controlling for the single prototypicality measures, the pattern of results and their interpretation generally remained the same.

the interaction with dual identification, with effects being particularly pronounced for high dual identifiers. Specifically, perceiving more relative prototypicality of the ingroup predicted less positive outgroup attitudes, more positive ingroup attitudes, more ingroup bias, less cultural similarities, and a more conservative political orientation. In addition, participants' meta-perception of relative prototypicality also affected all of these outcome variables, with the exception of ingroup attitudes. As expected, the effects of majority members' meta-perception were always in opposite direction to those of their own perception, and they were independent of dual identification. That is, the more that majority members believed that the minority perceived the ingroup to be less relatively prototypical, the less positive were their attitudes towards them, the greater was their ingroup bias, the less they perceived cultural similarities between both groups, and the more they had a conservative political orientation.

Because the effects of own- and meta-perceptions generally were of equal size and in opposite direction, one way to interpret this pattern is that greater perceived overlap or convergence between own and attributed perceptions was related to more positive intergroup outcomes (e.g. Ullrich, 2009). Notably, own and attributed relative prototypicality acted as suppressor variables for each other. That is, all effects were stronger or only became significant when the respective other perspective was controlled for, indicating that the predictive effect of participants' own perspective was contingent on their meta-perception, and vice versa.

Outgroup friends. Perceiving higher relative prototypicality predicted having less outgroup friends, while participants' meta-perception was unrelated to the number of outgroup friends.

Outgroup-directed emotions. Both own-perceptions of higher and meta-perceptions of lower relative prototypicality were related to less positive outgroup-directed emotions, and both effects were independent of dual identification.

Ingroup-directed emotions. More positive ingroup-directed emotions were predicted by higher relative prototypicality, independent of dual identification. Parallel to the pattern for ingroup attitudes, meta-perceptions of how majority members thought their outgroup represented the relative positions within the superordinate group did not predict ingroup-directed emotions.

Integration chances. More chances for integration of the minority (including permeable group boundaries) were perceived with lower relative prototypicality, but also by the belief that the minority perceived higher relative prototypicality.

Socio-structural variables. Higher relative prototypicality predicted more perceived legitimacy, less permeability, and higher ingroup status. Attributing lower relative prototypicality to the minority was related to perceptions of greater legitimacy and stability, and also tended to predict *lower* ingroup status.

Table 9. Main effects of own and attributed relative prototypicality in the majority sample of Study 2.

	relative prototypicality[a]		attributed relative prototypicality[a]	
	β	*p*	β	*p*
outgroup attitudes	-.24	.002	.30	.000
ingroup attitudes	.21	.004	-.06	*ns*
ingroup bias	.36	.000	-.24	.001
cultural similarities	-.19	.017	.18	.019
political orientation	.19	.010	-.31	.000
outgroup friends	-.20	.012	.00	*ns*
outgrop emotions	.27	.000	-.35	.000
ingroup emotions	-.24	.002	.04	*ns*
integration chances	-.18	.018	.17	.022
legitimacy	.20	.009	-.16	.028
permeability	-.22	.004	.08	*ns*
stability	.09	*ns*	-.15	.043
ingroup status	.17	.024	.13	.078

[a] Controlling for dual identification.

Mediation analyses - Majority

In order to examine whether intergroup emotions and socio-structural variables differentially mediate the effects of own and attributed relative prototypicality on intergroup attitudes, bias, cultural similarities, and political orientation, we conducted separate multiple mediation analyses using the same procedure described in Study 1. Ingroup emotions, outgroup emotions, integration chances and all socio-structural variables were entered as potential mediators into the analyses. For all indirect effects, the 95% bootstrap confidence intervals are reported in brackets, whereby intervals that do not include zero indicate a significant indirect effect.

Outgroup attitudes. For majority members' own relative prototypicality perception, only the indirect effects of ingroup emotions, perceived status, and perceived legitimacy were significant. With respect to attributed relative protoypicality, outgroup emotions, perceived status, and integration chances were the only significant indirect effects. The results of the two multiple mediations are presented in Table 10, as the example that best fit the hypothesized pattern of indirect effects.

Ingroup attitudes. Only ingroup emotions mediated the effect of relative prototypicality, CI [.0063 to .0186], such that higher relative prototypicality predicted more positive ingroup emotions, which in turn predicted more positive ingroup attitudes. Only outgroup emotions mediated the effects of attributed relative prototypicality, CI [-.0050 to -.0001], such that meta-perceptions of higher relative prototypicality predicted more positive ingroup attitudes via increased negative outgroup attitudes.

Ingroup bias. Parallel to ingroup attitudes, ingroup emotions mediated the effect of relative prototypicality, CI [.0643 to .1807], and outgroup emotions mediated the effects of attributed prototypicality CI [-.2642 to -.0545].

Cultural similarities. Integration chances mediated the effects for both own and meta-perceptions of relative prototypicality, CI_{own} [-.0122 to -.0004] and CI_{meta} [.0007 to .0099]. Higher relative prototypicality and lower attributed relative prototypicality both predicted less integration chances, which in turn was related to less cultural similarities Additionally, there was an indirect effect of participants' meta-perception through outgroup emotions CI [.0019 to .0121], whereby attributing lower relative prototypicality to the minority predicted less cultural similarities due to increased negative outgroup emotions.

Political orientations. Indirect effects were significant only for group members' own perception of relative prototypicality, namely ingroup emotions CI [.0013 to .0113], and perceived legitimacy, CI [.0002 to .0098]. A more conservative political orientation was predicted by higher relative prototypicality, because the latter increased ingroup emotions as well as perceptions of legitimacy.

Table 10. Indirect effects of own- and meta-perceptions of relative prototypicality on outgroup attitudes.

DV: Outgroup attitudes	Own-RP		Meta-RP	
	Coeff.	95% CI	Coeff.	95% CI
ingroup emotions	**-.0022**	**(-.0047, -.0004)**	-.0009	(-.0023, .0002)
outgroup emotions	-.0072	(-.0172, .0017)	**.0125**	**(.0046, .0208)**
integration chances	-.0026	(-.0067, .0000)	**.0022**	**(.0002, .0047)**
perceived status	**.0023**	**(.0001, .0051)**	**.0018**	**(.0001, .0041)**
legitimacy	**-.0039**	**(-.0095, -.0001)**	.0015	(-.0017, .0045)
stability	.0000	(-.0014, .0013)	.0000	(-.0010, .0012)
permeability	-.0008	(-.0028, .0005)	-.0001	(-.0010, .0006)

Note: Significant indirect effects are printed in bold.

Prediction of intergroup outcomes - Minority

Preliminary analysis: Identification as moderator

For the regression analyses in the minority sample, we first conducted preliminary regression analyses on all dependent variables that separately tested the interactions of the prototypicality measures with (a) the separate identification measure, (b) the simultaneous identification scale, but also (c) subgroup identification and (d) superordinate identification. Table 11 lists the significant (and marginal) interactions comparatively between the four identification measures. As can be seen from this table, simultaneous identification produced the least significant interactions, while the prototypicality perceptions interacted most with separate identification, followed by ingroup and superordinate identification. This indicates that the effects of own and attributed prototypicality perceptions depend on a combination of (ethnic) subgroup and (national) superordinate identifications, rather than on a definition of the majority in terms of a subgroup. Because our measure of separate vs. merged identification captured both identifications directly in a single item, we decided to use this measure as our moderating variable and to treat separate and merged identifiers as distinct

subsamples in our main analyses based on the median-split procedure described above[15]. As the single measures of prototypicality were the primary predictors of interest, only the significant effects of the multiple regression analyses with the four single prototypicality measures as predictors are reported. The complete results of these analyses as well as the respective analyses using the relative prototypicality measures can be found in Tables C3 and C4 of the appendix, respectively.

To recap, we predicted that merged identifiers' intergroup outcomes are primarily predicted by their own prototypicality perceptions, while those of separate identifiers are mainly predicted by their meta-representations, i.e. by how much ingroup prototypicality they thought the majority outgroup perceived.

[15] Please note that we used a median-split procedure for the sake of simplicity only. The reported patterns were highly convergent with the moderations in analyses in which we used separate identification as continuous measure instead.

Table 11. Interactions between prototypicality perceptions and identification measures in separate multiple regression analyses in the minority sample of Study 2.

	Subgroup ID				Superordinate ID				Simultaneous ID				Separate ID			
	own		meta		own		meta		own		meta		own		meta	
	IG-P	OG-P	IG-P	OG-P	IG-P	OG-P	IG-P	OG-P	IG-P	OG-P	IG-P	OG-P	IG-P	OG-P	IG-P	OG-P
OG attitudes	*	+	*			*	*		*	+		*		*	*	+
IG attitudes		+										*				
IG bias		+	*				+								*	
Cult. similarities			*													
Polit. orient.		*	+			*								*		
OG emotions	+					*			+	*				*		+
IG emotions		*		*	*								*			
Integr. chances		+		+		+										
superordinate ID															*	*
religiousness	+			+		*								*		
legitimacy					+	+		*					+	*		*
permeability						+								+		
stability																
IG status		+														

Note: own = own perception, meta = meta-perception, ID = Identification, IG-P = ingroup prototypicality, OG-P = outgroup prototypicality, IG = Ingroup, OG = Outgroup, * denotes interactions at $p < .05$, + denotes interactions at $p < .10$

Ingroup attitudes. Higher ingroup prototypicality predicted more positive ingroup attitudes, both among merged identifiers, β = .56, p =.001 , and to a lesser extent also among separate identifiers, β = .32, p =.054.

Outgroup attitudes and ingroup bias. For merged identifiers, only higher outgroup prototypicality predicted more positive outgroup attitudes, β = .44, p =.003, and thinking the majority perceived higher ingroup prototypicality tended to be related to less positive outgroup attitudes, β = -.26, p = .079. Less ingroup prototypicality predicted less ingroup bias among merged identifiers, β = .30, p = .080. For separate identifiers, as expected, only participants' meta-perception of higher ingroup prototypicality predicted more *positive* outgroup attitudes, β = .31, p = .035 and less ingroup bias, β = -.38, p = .012.

Cultural similarities. For both identification types, none of the prototypicality measures predicted cultural similarities, all ts < 1.

Political orientation. Higher outgroup prototypicality predicted a more liberal (left-wing) political orientation, but only among merged identifiers, β = -.35, p = .027.

Outgroup friends. Separate identifiers indicated to have more outgroup friends the more they believed that the majority perceived higher ingroup prototypicality, β = .33, p = .027, and more when they themselves thought the outgroup was less prototypical, β = -.25, p = .079. No significant predictors emerged in minority members with merged identification.

Religiousness. Higher outgroup prototypicality also predicted less religious beliefs among merged identifiers, β = -.43, p = .007, and a tendency for a relation in the opposite direction was observed among separate identifiers, β = .25, p = .100. Contrary to our expectations, separate identifiers' meta-perception did not reliably predict religiousness (though a descriptive trend in the expected direction emerged for attributed ingroup prototypicality).

Superordinate identification. Merged identifiers' own perception of higher ingroup prototypicality predicted stronger ingroup identification, β = .43, p = .006, while believing the majority perceived higher ingroup prototypicality had a dis-identifying effect, β = -.34, p = .029. Conversely separate minority members identified more strongly with the superordinate category when they believed the majority perceived higher ingroup prototypicality, β = .31, p = .029, but also when they attributed higher outgroup prototypicality to the majority, β = .37, p = .008.

Outgroup-directed emotions. Higher outgroup prototypicality predicted more positive outgroup emotions only among merged identifiers, β = -.43, p = .002. No significant effects emerged for separate identifiers.

Ingroup-directed emotions. Higher ingroup prototypicality predicted more positive ingroup emotions only among merged identifiers, β = -.41, p = .013. Again, no significant effects emerged for separate identifiers.

Integration beliefs. For both identification types, none of the prototypicality measures predicted cultural similarities, all ts < 1.

Socio-structural variables. While perceived stability and permeability were not predicted by (attributed) prototypicality for both identification types, less legitimacy was perceived by separate identifiers the more they perceived high outgroup prototypicality, β = .26, p = .070, but also the more they thought that the majority perceived themselves to be prototypical, β = .35, p = .019 (the opposite tendency emerged for merged identifiers, β = -.26, p = .103).

Mediation analyses - Minority

We also tested potentially mediating variables within the minority sample, using the MEDIATE syntax for SPSS provided by Hayes & Preacher (2011). In addition to testing multiple mediators, this syntax also allows to test the competing effects of multiple independent variables, i.e. of own- and meta-perceptions. Thus, we examined whether mediating processes operated only with respect to merged identifiers' own- but not their meta-representations, and only with respect to separate identifiers' meta- but not their own-representations. Specifically, the four single measures of own and attributed ingroup and outgroup prototypicality were entered as predictors of intergroup attitudes, and ingroup and outgroup emotions, superordinate identification, the socio-structural variables (perceived ingroup status, legitimacy, stability and permeability), and integration beliefs were simultaneously entered as potential mediators.

While we did not find any significant indirect effects in the merged minority (all bootstrap confidence intervals included zero), the analyses revealed that superordinate identification mediated the effect of attributed ingroup prototypicality on outgroup attitudes for separate identifiers, CI [.0014 to .1703]. As depicted in Figure 8, stronger beliefs that the majority perceived the minority to be more prototypical predicted increased superordinate identification, β = .32, p = .018, which in turn predicted more positive outgroup attitudes, β = .56, p < .001 (controlled for perceived ingroup prototypicality)[16].

[16] Note that the mediation still holds and the effect sizes are highly similar even when controlling for the other prototypicality measures, i.e. ingroup prototypicality, outgroup prototypicality, and attributed outgroup prototypicality.

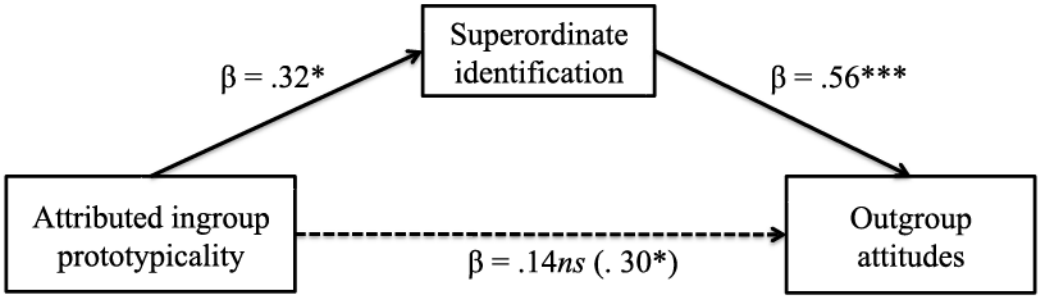

Figure 8. Mediation by superordinate identification in the separate minority subsample of Study 2.

3.2.3 Discussion

Study 2 generally replicated the pattern of mean differences found in Study 1, and thereby corroborated our assumption of objective perspective divergence between majority and majority members, independent of whether the superordinate category was framed within different towns within Germany or Germany as a whole. Specifically, compared with the minority, majority members perceived both greater relative prototypicality of the German majority and less prototypicality of the Turkish minority. Put differently, minority members perceived their ingroup as being closer to the prototype of the superordinate category than majority members did, both in relative and in absolute terms.

Also consistent with our Study 1 findings, this perspective divergence was subjectively perceived as such by minority members, who believed that the majority perceived less (relative) prototypicality of their ingroup. Moreover, in this Study, but unlike Study 1, subjective perspective divergence was also evident in the majority sample, and to an even greater extent than among minority members. Indeed, majority members believed that the minority perceived much less (relative) prototypicality of their ingroup compared with their own view. Importantly, both groups' meta-perceptions did not accurately reflect the outgroup's actual perceptions. Rather, they appeared to be biased, with both groups underestimating the degree to which their outgroup found them relatively prototypical.

Following the social identity threat approach, this bias together with group members' subjective perspective divergence may be interpreted as signs that both minority *and* majority group members perceived their outgroup perspective as threatening to their ingroup's status and identity. It seems that situational factors not present in the first Study may have lead not only minority but also majority members to perceive the minority's perspective as identity

threatening. Although we can only speculate, it is quite possible that a change in the political, social, and economic climate following the worldwide financial crisis that started in September 2008 with the collapse of the Lehman Brothers bank constituted a threat to group members' social status (e.g. (Becker, Wagner, & Christ, 2011), which may have shifted majority members' focus to (also) take into account the minority's view (Shelton et al., 2006). In fact, data of Study 1 were collected prior to the crisis and in times when political debates on integration issues stood in a more prospective and positive light (e.g. Halisch, 2008; Özcan, 2007). In contrast, data of Study 2 were collected in the beginning of 2010, a few months before the now widely discussed book by the now-famous German banker and politician (Sarrazin, 2010) acuminated the debate on integration to the question of whether or not the 'migrants' in Germany - a term meanwhile almost set equal to the 'Turks in Germany' but also more generally referring to 'the Muslims' – would soon be the dominant group in Germany, with detrimental consequences for the country's culture and economy. Thus, the fear of economic and social loss likely translated in to a threat to the status quo, particularly for dominant groups who have much more to lose than those who are deprived of benefits and resources anyway (Stephan, Ybarra, & Morrison, 2009)

Further in line with the threat hypothesis, majority members' meta-perceptions of (relative) ingroup prototypicality were significant predictors of intergroup attitudes, in addition to their own perception. What is more, that own- and meta-perceptions acted as suppressor variables for each other implies that each perception constrained the effects of the other: Lower relative prototypicality predicted more positive outgroup attitudes – but only given that the outgroup was believed to secure the status quo by perceiving high relative prototypicality of the ingroup. In other words, it appears that the majority's tolerance of greater minority prototypicality is limited by or conditioned on being certain that the status quo is preserved. As a complementary way to interpret this pattern, the detrimental effects of perceived challenge of the status quo (i.e. lower attributed relative prototypicality) are especially pronounced when own perceptions of relative prototpicality are high.[17] Thus, in support of the social identity threat approach, those who are more prone to see their status as being challenged by the minority also more strongly legitimize the status quo by perceiving higher relative prototypicality (and vice versa). It should be noted that this suppressor effect was only apparent in Study 2, where own- and meta-perceptions were substantially related (r

[17] Another way to show this pattern is by an interaction between group members' own- and their meta-perception. Indeed, this interaction was significant and suggests the same interpretations.

= .46**), unlike in Study 1 (rs < .18, ns). The differences in these correlations are probably due to the different measures (forced-choice vs. quotient) measures. Yet, because the forced-choice measure employed in Study 2 can be said to more 'purely' represents the relative aspect of relative prototypicality (as opposed to a composition of single measures), I believe that the Study 2 findings closely reflect the interplay between own- and meta-perceptions of *relative* prototypicality.

Interestingly, in the majority sample, we replicated the pattern regarding the role of dual identification. While it again functioned as a moderator for majority members' own relative prototypicality perceptions, no such moderation was observed with respect to their meta-perception, as in Study 1. This corroborates our preliminary interpretation as well as related theory and evidence (e.g. Shelton et al., 2006) that dual identification was not necessary as a differentiating variable to account for the effect of making majority members think about the minority perspective.

Going one step further than Study 1 in understanding the unique contributions of own- versus meta-perceptions of the superordinate category, we could show in Study 2 that the effects of own- versus meta-perceptions operate through different mechanisms, confirming that both perspectives are indeed crucial to truly understand the processes underlying intergroup evaluations. Specifically, among majority members, own perceptions of relative prototypicality were related to intergroup attitudes and bias via socio-structural considerations, i.e. justification (or questioning) of the status quo, namely the legitimacy, stability and permeability of the status relation. On the other hand, effects of majority members' meta-perceptions operated mainly through emotions directed at the outgroup, as well as beliefs regarding the Turks' successful integration chances. In fact, attributed perceptions regarding the ingroup's relative prototypicality mattered most for the majority members' appraisal of greater integration chances. As such, successful integration in the majority's eyes resulted from the belief that the minority accepts to assimilate, i.e. to define the superordinate group relatively more in terms of the majority subgroup's attributes (or typicality). Interestingly, there was a positive relation between attributed relative *ingroup* prototypicality and integration chances, a scale that includes aspects of permeable group boundaries in Study 2, but between attributed *outgroup* prototypicality and permeability in Study 1. As mentioned in the discussion of Study 1, it seems that the permeability items in Study 1 reflected more the fact that a minority member who is perceived to conform to the prototype as defined by the majority is more likely to also be regarded as a majority member. On the other hand, the relation between attributed relative prototypicality and integration

chances indicates that equal opportunities are perceived to be more likely the more majority members believe that the minority accepts the majority's greater relative prototypicality. This possibly implies that what the majority requires from the majority for more successful integration is in fact an assimilative standpoint (see also Verkuyten & Reijerse, 2008), at least to the extent that extremely high relative majority prototypicality becomes equal to an almost purely majority-defined prototype (cf. the pars-pro-toto effect; Wenzel et al., 2003; Waldzus, 2010). Still, the exact nature of the relationship between attributed prototypicality and permeability perceptions remains to be uncovered and clearly deserves closer attention in future research.

Next to the differential mediators, there was also a common mechanism underlying both own and meta-perceptions, namely perceived ingroup status. Regarding group members' own perceptions of relative prototypicality, this corroborates the IPM's assumption that relative prototypicality partially reflects the relative status positions of the subgroups. Expectedly, and in line with the social identity threat account, ingroup status also mediated the relation between majority members' attributed perceptions and intergroup attitudes.

Taken together, with respect to the majority sample, our analyses replicate previous research regarding the impact of relative prototypicality on intergroup outcomes, as well as regarding the effect-enhancing role of high dual identification. More importantly, the findings extend previous research by suggesting that meta-perceptions of how the outgroup is believed to represent the superordinate group is differentially relevant to intergroup evaluations over and above group members' own perceptions as it displays a status challenging representation that appears to determine intergroup relations through assimilationist beliefs and outgroup-oriented emotions.

With respect to the minority sample, Study 2 identified separate versus merged identification as a moderator that more clearly specified whether and how group members' own or their perception attributed to the outgroup were related to each other and to intergroup evaluations. Generally, separate identifiers projected more at the target level, thereby thinking that the majority *did not* have the similar perspectives. Conversely, merged identifiers projected more at the specific category, indicating that in their eyes both perspectives were more aligned. Though only correlational, these patterns are supportive of the differential psychologies of separate and merged identifiers: The former tend to view minority and majority perspectives as distinct whereas they seem compatible to the latter (e.g., Benet-Martínez et al., 2002).

More central to our predictions, separately identified minority members' meta-perception regarding the extent to which the majority was thought to recognize the minority within the superordinate group was the strongest and most significant predictor of intergroup evaluations – outgroup attitudes, outgroup friends, and ingroup bias. Their own perceptions ingroup prototypicality only predicted ingroup attitudes, as in Study 1, which is supportive of the (intuitive) assumption that one's own perspective on the ingroup's standing is a primary, perhaps even the default mechanism for ingroup evaluation. Together, by extracting this group of separate minority identifiers we found strong support for the hypothesis derived from the social identity threat account that those minority members who are strongly attached to their ingroup (while distancing themselves from the majority outgroup, but not the superordinate group) may experience the belief that the majority does not find them prototypical as a threat to their ingroup's identity, recognition, and perhaps even existence. As a consequence, the less they believe the majority recognizes the minority within the larger group, the more they respond negatively to the intergroup relation. With respect to outgroup attitudes the negative effect was due to a decrease in superordinate identification, corroborating the pattern found in Study 1 as well as previous evidence that perceived rejection is related to dis-identification with the national group among ethnic minority members (Verkuyten & Yildiz, 2007).

It seems that the impact of low perceived ingroup prototypicality was so strong that separate identifiers' own perspective had little to no relevance in explaining intergroup outcomes. This is highly convergent with the idea that the powerless often focus on the perspective and goals of the powerful (e.g. Keltner et al., 2003), but goes beyond this account and related evidence by showing that a powerless group such as an ethnic minority not only give strong relevance to their outgroup's perspective, but these results demonstrate for the first time that they do so *more than to their own perspective*.

Conversely, among the merged minority, with the exception of attributed lower ingroup prototypicality predicting *more* positive ingroup attitudes, as was the case in Study 1, only their own perceptions of (relative) prototypicality were linked to intergroup orientations. Specifically, among merged identifiers higher outgroup prototypicality predicted more positive outgroup attitudes and outgroup emotions, less religious beliefs, and a more liberal political orientation. Similarly, minority-related outcomes such as more positive ingroup attitudes, ingroup bias and ingroup emotions, as well as higher superordinate identification were predicted by merged identifiers' perception of how prototypical the minority ingroup was. Again, as already apparent in the results of Study 1, these findings strongly suggest that

dual identifiers within the minority are not conflicted and divided between the minority and majority worlds, but appear to truly integrate both: in their eyes, high minority prototypicality positively reflects on the minority, and high majority prototypicality is positively related to majority-related outcomes, both emotionally and attitudinally. Further, for the dual minority members of Study 2, the attributed perspective of the majority did not have explanatory value over and above their own perception, which could be interpreted in two not mutually exclusive ways. On the one hand, one could argue that due to their overlapping dual identities, own- and meta-perspective are not clearly separable, such that the majority's perspective is highly similar to or even confounded with one's own. However, the pattern of intercorrelations speaks against this explanation since own- and meta-perceptions were (a) only moderately related, and (b) not stronger than within the separate minority or the majority. Thus, on the other hand, it seems more plausible that, following the social identity threat account, the perspective of the majority was not interpreted as threatening dual identifiers' own position within the superordinate group.

With regard to the socio-structural variables, they were, as in Study 1, unrelated to intergroup attitudes and bias, and played no mediating role. Interestingly, however, beliefs regarding how prototypical the majority perceived themselves to be predicted legitimacy and status perceptions, but only among separate minority members. This means that to separate minority members, structural aspects were evaluated not with respect to the attributed position of the ingroup but rather with respect to how much room the majority was thought to claim for *themselves* within the superordinate group. More precisely, thinking that the majority claimed greater prototypicality of themselves predicted lower perceived legitimacy and lower ingroup status. Though we had not put forward specific predictions regarding the seemingly differential roles of attributed *ingroup* versus *outgroup* prototypicality, understanding this result may be facilitated when comparing the explanatory value of both predictors: For the separately identified, the attributed position of the powerful majority determines how the social structure of the relationship is perceived. Yet, what is significant when it comes to the evaluative dimension of the intergroup relation is not the perhaps too abstract social structure, but the perception from which the minority's position is most directly inferred, namely attributed ingroup prototypicality.

Whereas among merged identifiers, none of the prototypicality perceptions predicted socio-structural aspects, intergroup emotions were predicted by prototypicality perceptions for this group only, but not for the separate minority. That prototypicality representations were related to intergroup emotions only for the mergedly identified and to socio-structural

aspects only for the separately identified may reflect the two very different concerns of these two groups. While the former attach emotional significance to both groups, and positively evaluate both according to their prototypicality for the superordinate group, the latter fear to not see their subgroup adequately represented within the larger one. Exploring these apparently differential pathways for dual versus separate identifiers clearly deserves more attention in future research.

Finally, we would like to note that though many effects within the minority sample reached substantial size (equal to those observed in the majority, i.e. with betas between .15 and .20) could not be interpreted because they lacked statistical significance (*p*s > .10). This is likely due to both the relatively small sample size and the greater variance within ethnic minorities, which may also explain why no mediations by socio-structural variables or emotions were found in the minority sample.

In sum, compared to Study 1, the more clear-cut differentiation between separate and dual identifiers in this second study more strongly revealed the predicted pattern that – even though the respective other perception may not be unimportant – what most strongly predicted separate minority identifiers' perception of the intergroup relation were the perceptions attributed to the majority outgroup, while to dually identified minority members, their own perspective mattered most.

3.3 Study 3

By taking an intergroup relations perspective on the acculturation orientation frameworks, the primary goal of the third study was to examine whether the assumptions of differential relevance of own vs. meta-perspectives also hold with respect to superordinate group representations in terms of acculturation orientations. Specifically, we aimed to test whether the relative influence of own and meta-representations of the superordinate group on intergroup outcomes can be observed over time, while controlling for the outcomes' stability. The longitudinal approach taken in Study 3 also allowed us to examine the causal directionality of the relationships between group members' own and their meta-perspective. In this regard, we attempted to shed light on the question of how own and meta-perceptions affect each other using – for the first time to our knowledge – a longitudinal correlational design. This design would also allow us to differentiate cross-sectional relations from longitudinal influence or change.

Thus, Study 3 aimed to extend previous research on the relation between acculturation orientations and intergroup relations in three important ways. First, we disentangled the relative contributions of own and meta-perceptions of acculturation orientations simultaneously, rather than only taking into account group members' own preference (Zagefka et al., 2007; Zick et al., 2001), the one attributed to the minority (Tip et al., 2012; Zagefka et al., 2009), or looking at the relative fit (Piontkowski et al., 2002; Zagefka & Brown, 2002). Second, while most studies have looked at either the majority or the minority, the present study adds to the few that have targeted both sides. Third, to our knowledge, we are the first to investigate the specific contributions of majority and especially minority members' perceptions of their outgroup's acculturation strategy over time.

Although we and others have argued that acculturation preferences are conceptually related to prototypicality perceptions by conveying information regarding the perceived complexity of individuals' representation of the superordinate group (see Mummendey & Kessler, 2008), one crucial differentiation should be taken into account, namely that between actual and ideal states (Higgins, 1987). Perceptions of (relative) prototypicality have almost exclusively been operationalized as actual subjective representations of the status quo (for the one exception, see Berthold, Mummendey, Kessler, Luecke, & Schubert, 2012). Conversely, acculturation orientations are typically formulated in terms of *preferences* as ideal standards that group members would like to have realized, and/or in terms of *demands* as ought standards that they insist on (Brendl & Higgins, 1996; Fritsche, Kessler, Mummendey, & Neumann, 2009). In line with Higgin's (1987) self-discrepancy theory, and following Berthold and colleagues (Berthold et al., 2012), we assume that relative to their actual representations, group members' ideal and ought representations are more strongly defined and guided by motivational aspects. In turn, how subgroups ideally visualize their superordinate group to look like is more strongly related to intergroup outcomes than their actual representations (Berthold et al., 2012). We therefore expected that – relative to the findings regarding actual representations in Studies 1 and 2 – the stronger motivational component involved in ideal (and ought) representations accentuates the pattern of effects by emphasizing the 'default perspective' generally focused on.

Similar to Studies 1 and 2, intergroup attitudes and bias constituted the main dependent variables of interested. In addition, we also tested the longitudinal effects on intergroup emotions as well as group members' intergroup anxiety in anticipated intergroup contact. As the previous two studies had shown that dual identification did not moderate the effects of meta-perceptions among majority members, and as the focus was on the time-dependent

influence of own versus attributed acculturation preferences, we decided not to account for this variable within the majority sample. Yet, the pattern of subgroup and superordinate group identifications was again used as a differentiating variable between those with separate versus more merged identities within the minority sample.

To recap our hypotheses, the objective divergence hypothesis predicted that majority members display a stronger preference for cultural adoption over cultural maintenance, while the reverse should be true for minority members, particularly for the separately identified. Following the subjective divergence hypothesis, majority members should believe that minority members want to adopt relatively less, compared with majority members' own preference. In contrast, minority members think that the majority wants them to adopt relatively more to the mainstream culture (or maintain their heritage culture relatively less), relative to their own preference.

With respect to the prediction of intergroup outcomes by acculturation orientations, we hypothesized that among majority members as well as among merged minority members, *own* acculturation orientations have the strongest influence over time on the dependent variables, 'discarding' the impact of the acculturation goals attributed to the outgroup. Conversely, we predicted that among separately identified minority members, their *meta*-representations, i.e. the acculturation orientations attributed to the majority, should be the main if not exclusive variables in predicting change in intergroup outcomes over time. In the present study, we will primarily focus on group members' own and attributed ideal representations or acculturation *preferences*, and additionally examine whether corresponding effects will show with respect to their ought representations or acculturation *demands*.

Lastly, we examined the causal directionality between participants' own- and attributed acculturation preferences. Following Brown and Zagefka (2011), we predicted that, over time, group members' meta-perceptions would influence their own perceptions more than vice versa.

3.3.1 Method

Participants and Design

The dataset from which the sample of the present study was taken consisted of subsamples from three different nations. These data were collected within a research project on 'Immigration, racism, and acculturation: A three nation study' awarded by the European

Science Foundation to R. Brown, J.-P. Leyens, A. Mummendey, and T. Kessler. In this longitudinal study conducted at schools in Belgium, the UK, and Germany, about 7000 adolescents were surveyed on a variety of topics. Parts of the data have been published elsewhere (Binder et al., 2009; Kessler et al., 2010).

We decided to concentrate on the majority and minority samples from Germany for the respective analyses rather than combining all national samples because the relationships between acculturation preferences and intergroup outcomes have been argued to depend on the societal climate (Berry, 1997, 2008), and because we did not want to further increase the substantial heterogeneity that generally exists within ethnic minority samples. Specifically, the sample comprised a total of $N = 662$ students from secondary schools in Germany, of which $n = 484$ were majority and $n = 167$ minority members. Data were collected at two measurement points (six months time lag) between spring 2004 and fall 2005, at the first of which participants were on average 16 years old (with a range from 13 to 20 years). We included only those majority and minority students who in both waves consistently indicated to be respectively native (without migration background) or immigrant (with migration background), whereby minority participants were of various backgrounds, mainly migrants from Turkey ($n = 66$), and the former Soviet Union ($n = 52$)[18].

Measures

Unless indicated otherwise, participants indicated their answers on 5-point Likert scales, with responses ranging from 1 '*not at all*' to 5 '*very much*'.

Identification

Participants indicated their identification with their subgroup (Sub), namely 'Germans' and 'immigrants in Germany' for majority and minority participants, respectively, and with the superordinate group (Sup) 'people in Germany' on two items for each identification scale, namely 'I see myself as German [immigrant in Germany / someone from Germany]', and 'I like to be a German [an immigrant in Germany / someone from Germany]'. Internal consistencies were $\alpha_{Sub\ t1} = .75$ and $\alpha_{Sup\ t1} = .62$ ($\alpha_{Sub\ t2} = .77$ $\alpha_{Sup\ t2} = .57$) within the majority sample, and $\alpha_{Sub\ t1} = .67$ and $\alpha_{Sup\ t1} = .75$ ($\alpha_{Sub\ t2} = .85$ $\alpha_{Sup\ t2} = .76$) within the minority sample.

[18] See Appendix B for the complete list of migration backgrounds.

Own acculturation orientations

Group members' own preferences were assessed with two items for cultural maintenance and cultural adoption. For majority members, the items respectively read 'I think that the immigrants should speak their original language [should speak German] very often.', and 'I think that the immigrants should keep their culture [take on the German culture].'. Internal consistencies were $\alpha_{Maj\ t1} = .68$ ($\alpha_{Maj\ t2} = .67$) for cultural maintenance and $\alpha_{Maj\ t1} = .52$ ($\alpha_{Maj\ t2} = .59$) for cultural adoption. For the items for minority participants, 'the immigrants' was replaced with 'my group' ('wir Zuwanderer' in German), $\alpha_{Min\ t1} = .60$ ($\alpha_{Min\ t2} = .69$) for cultural maintenance, and $\alpha_{Min\ t1} = .64$ ($\alpha_{Min\ t2} = .64$) for cultural adoption.

As supplementary indices, demands with respect to cultural adoption and maintenance were additionally assessed using the same four items, except that the introductory wording was changed to 'I *insist* that […].', to which participants responded with either 'yes' or 'no'. The two respective items for adoption and maintenance demands were averaged and had internal consistencies of $\alpha_{Maj\ t1} = .51$ ($\alpha_{Maj\ t2} = .46$) and $\alpha_{Min\ t1} = .53$ ($\alpha_{Min\ t2} = .63$) for cultural maintenance, and $\alpha_{Maj\ t1} = .52$ ($\alpha_{Maj\ t2} = .53$) and $\alpha_{Min\ t1} = .56$ ($\alpha_{Min\ t2} = .44$) for cultural adoption.

Perceived acculturation orientations

To assess group members' meta-perception of their outgroup's acculturation preference, participants were first asked to put themselves in the position of the outgroup and to then indicate what they thought the outgroup wanted. Specifically, for the majority sample, the two respective items for perceived maintenance and perceived adoption read 'The immigrants want to speak their original language [German] very often.' and 'The immigrants want to keep their culture [take on the German culture]', $\alpha_{Maj\ t1} = .81$ ($\alpha_{Maj\ t2} = .85$) for cultural maintenance and, $\alpha_{Maj\ t1} = .75$ ($\alpha_{Maj\ t2} = .79$) for cultural adoption. For the minority sample the wording of the items was 'The Germans want us to speak our original language [German] very often.' and 'The Germans want us to keep our culture [take on the German culture].', $\alpha_{Min\ t1} = .78$ ($\alpha_{Min\ t2} = .78$) for cultural maintenance and $\alpha_{Min\ t1} = .68$ ($\alpha_{Min\ t2} = .65$) for cultural adoption.

Parallel to group members' own demands, those attributed to the outgroup were also assessed, whereby participants were asked to indicate whether or not they thought that their outgroup *insisted* on the minority's cultural maintenance, $\alpha_{Maj\ t1} = .66$ ($\alpha_{Maj\ t2} = .67$), and α_{Min}

$_{t1}$ = .67 ($\alpha_{Min\ t2}$ = .54), and on cultural adoption by the minority, $\alpha_{Maj\ t1}$ = .58 ($\alpha_{Maj\ t2}$ = .64), and $\alpha_{Min\ t1}$ = .43 ($\alpha_{Min\ t2}$ = .39).

Ingroup bias

To measure group members' evaluative bias in favor of the ingroup, participants indicated on single items the extent to which they evaluated the Germans [the immigrants] positively, with possible answers ranging from 1 '*rather negatively*' to 5 '*rather positively*'. A difference score subtracting outgroup from ingroup evaluations indicated the amount of ingroup bias.

Intergroup attitudes

Subtle prejudice was measured with four items from Pettigrew & Meertens' (1995) *cultural distance* subscale, asking participants how similar they thought ingroup and outgroup were with respect to honesty, values taught to their children, work ethics, and the role of women, $\alpha_{Maj\ t1/t2}$ = .68 / .74, $\alpha_{Min\ t1/t2}$ = .75 / .74.

Four items measured positive *behavioral intentions* towards the outgroup (e.g. to donate money for mutual events, to have contact with the outgroup), $\alpha_{Maj\ t1/t2}$ = .80 / .83, $\alpha_{Min\ t1/t2}$ = .70 / .70.

The contact quality scale comprised three items adapted from Islam & Hewstone (1993). Participants were asked to indicate how distant or close, unequal or equal to them, and whether they worked together or against each other, $\alpha_{Maj\ t1/t2}$ = .77 / .76, $\alpha_{Min\ t1/t2}$ = .78 / .71.

Intergroup emotions

Intergroup emotions were conceptualized as rather broad emotional tendencies towards their outgroup (Dijker, 1987). Participants were asked 'In general, what are your feelings toward immigrants [Germans], and were to indicate their responses to three positive emotions (admire, trust, like) and three negative emotions (feeling angry, irritated, annoyed) on a 5-point scale from 1 '*never*' to 5 '*very often*'. Principal component factor analyses on all six emotions yielded a one-factorial solution at both time points for the majority sample, with the first factor explaining 57.67% and 63.85% of the total common variance at time 1 and time 2, respectively. For the minority, two components were extracted at each time points, whereby the positive emotions loaded on the first factor explaining 48.98% (time 1) and 44.11% (time 2) of the total common variance, and the negative emotions on the second factor, explaining 17.46% (time 1) and 22.66% (time 2) of the total common variance. Therefore, we computed

two separate emotion scale, one for positive emotions, . $\alpha_{Maj\ t1/t2}$ = .79 / .82, $\alpha_{Min\ t1/t2}$ = .77 / .75, and one for negative emotions, $\alpha_{Maj\ t1/t2}$ = .84 / .90, $\alpha_{Min\ t1/t2}$ = .70 / .74.

Intergroup anxiety

As a measure of intergroup anxiety, participants indicated their emotional responses during an imagined contact situation (Stephan & Stephan, 2000). Specifically, participants were asked to imagine themselves working together on a task with several outgroup members before rating the extent to which this interaction would make them feel nervous, comfortable (recoded), anxious, at ease (recoded), awkward and accepted (recoded) in such situations, $\alpha_{Maj\ t1/t2}$ = .75 / .80, $\alpha_{Min\ t1/t2}$ = .73 / .75.

3.3.2 Results

Preliminary Analyses

Minority identification patterns

As the dataset contained no direct measure of separate/merged identification, we differentiated between merged and separate identifiers within the minority sample following Hutnik (1991). Specifically participants were categorized into two groups according to their levels of identification with the minority ingroup and the superordinate group. Participants above the scale midpoints on the superordinate identification scale were classified as 'merged identifiers'.[19] Those who scored above the midpoint on subgroup identification and below the scale midpoint on the superordinate identification measure were classified as 'separate identifiers'.

Cross-sectional means and intercorrelations

The means and intercorrelations for the main variables of interest[20] are presented in Tables 12 and 13a-c, separately for the majority and the two minority samples. In the

[19] Note that this category contains both 'integrated' and 'assimilated' individuals, because we did not differentiate between low vs. high ethnic minority identification. This lack of differentiation was accepted in order to obtain a sufficiently large sample size (n=59) for our longitudinal analyses.

[20] For the sake of simplicity, though the acculturation *demand* measures were used as additional predictors, we only included group members' acculturation *preferences* into the tables of correlations. However, inspection of

majority sample, as expected, all the dependent variables were substantially interrelated. Moreover, the pattern of coefficients was highly consistent across waves. In particular, while majority members' own acculturation preferences were related to all of the dependent variables in the expected direction, the correlations of the preferences attributed to the minority (their meta-perceptions) were much weaker and less consistent. The intercorrelations between the acculturation preferences strikingly show that majority members seem to understand cultural adoption vs. maintenance not as independent orientations, but as the two poles of one dimension: More preference for adoption is associated with less preference for maintenance. The same holds for the attributed preferences: the more it was believed that the minority wants to maintain, the less majority members thought that the minority wanted to adopt. Interestingly, wanting the minority to maintain their culture was positively related to the belief that the minority wanted to adopt. Caution should be given to the exact meaning of these correlations, as they neither allow for a causal nor directional interpretation.

In both minority samples, there were some relevant correlational differences between the first and second waves, potentially due to the lower sample sizes relative to the majority, yet still showing that the minority data were more subject to change and variability. In the minority sample involving the more separately identified, the dependent variables were substantially interrelated, with the exception of intergroup anxiety. Notably, while almost exclusively own- but not attributed acculturation preferences were related to the prejudice, evaluation, and emotion measures in the first wave, both one's own adoption preference and the maintenance preference attributed to the majority had the most correlations to the dependent variables in wave 2.

Among the more merged minority members, there were substantial interrelations between the dependent variables, similar to the separate minority. Regarding the acculturation preference measures, the preference with the most correlations to the dependent variables was, across waves, merged identifiers' own preference for cultural adoption. Similar to the majority, own and attributed preferences for adoption were negatively related to own and attributed preferences for cultural maintenance, respectively.

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the respective correlations generally yielded similar patterns for the preference and demand items, across samples and waves.

Cross-sectional interrelations of own- and meta-perceptions

The pattern of intercorrelations between the acculturation preferences measures shows that among majority members, own and meta-preferences were unexpectedly unrelated in the case of cultural adoption. With respect to cultural maintenance, the more they themselves opted for maintenance, the more they also thought that the minority wanted to maintain their culture.

In the minority samples, the intercorrelations were less consistent across waves. Among the separately identified there was, parallel to the majority sample, no relation between own and attributed preferences on the adoption dimension, and a *negative* correlation on the maintenance dimension (at time 1 only). Thus, the more that separate identifiers wanted to maintain, the less they believed the majority wanted them to (and vice versa). Conversely, among merged identifiers, positive correlations were visible on both dimensions, but again only at the time 1: What they believed the majority to prefer corresponded to what they themselves preferred.

Together, the cross-sectional correlational patterns within the majority consistently indicated over both time points that majority members' own- and meta-perceptions were, with respect to the cultural maintenance dimension, moderately correlated, as in Studies 1 and 2. The same was true for merged identifiers within the minority, though only at time 1. In contrast, separate identifiers showed a tendency to contrast their own acculturation preference from that of the majority.

Table 12. Means of the main variables across subsamples in Study 3.

	Majority				Separate Minority				Merged Minority			
	t1		t2		t1		t2		t1		t2	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
own-adopt	4.09	(0.78)	3.97	(0.85)	2.97	(0.98)	2.93	(0.98)	3.78	(0.97)	3.51	(1.01)
own-maintain	2.28	(0.96)	2.24	(0.96)	4.19	(0.81)	4.17	(0.86)	3.81	(0.95)	3.89	(0.94)
meta-adopt	2.70	(1.01)	2.62	(0.98)	4.38	(0.85)	4.47	(0.72)	4.50	(0.71)	4.49	(0.70)
meta-maintain	3.90	(0.99)	3.99	(0.95)	2.08	(1.03)	2.06	(1.13)	2.28	(1.13)	2.35	(1.18)
IG bias	0.81	(1.35)	0.92	(1.50)	1.13	(1.44)	1.00	(1.39)	0.43	(1.00)	0.62	(0.89)
social distance	3.12	(1.04)	3.22	(1.04)	2.78	(0.85)	2.73	(0.94)	1.86	(0.66)	1.99	(0.71)
cultural distance	3.48	(0.78)	3.59	(0.81)	3.55	(0.80)	3.57	(0.90)	2.93	(0.91)	3.26	(0.72)
behavioral intentions	2.86	(0.96)	2.76	(0.99)	2.74	(0.82)	2.78	(0.86)	3.45	(0.82)	3.05	(0.83)
social competition	3.10	(0.95)	3.19	(1.04)	2.86	(0.88)	3.12	(1.05)	2.71	(0.82)	3.07	(1.02)
contact quality	3.69	(0.84)	3.69	(0.83)	3.56	(1.02)	3.60	(0.88)	4.10	(0.74)	3.85	(0.81)
positive emotions	2.84	(0.83)	2.76	(0.84)	2.62	(0.94)	2.58	(0.89)	3.32	(0.75)	3.00	(0.75)
negative emotions	2.58	(1.00)	2.81	(1.06)	2.51	(0.99)	2.70	(0.94)	2.12	(0.70)	2.34	(0.88)
intergroup anxiety	2.71	(0.75)	2.78	(0.81)	2.20	(0.67)	2.29	(0.77)	2.20	(0.84)	2.22	(0.73)

Table 13a. Intercorrelations between the main variables within the majority sample in Study 3.

		1	2	3	4	5	6	7	8	9	10	11	12	13
1	Own-adopt		-.53**	.04	.00	.42**	.39**	.20**	-.34**	.30**	-.22**	-.33**	.33**	.25**
2	Own-maintain	-.54**		.18**	.05	-.48**	-.57**	-.33**	.55**	-.50**	.36**	.46**	-.42**	-.27**
3	Meta-adopt	-.09	.21**		-.53**	-.16**	-.17**	-.22**	.15**	-.20**	.16**	.10*	-.13**	-.09*
4	Meta-maintain	.05	.04	-.52**		.06	.03	.02	-.01	.04	-.04	-.01	.05	.05
5	Ingroup bias	.39**	-.46**	-.18**	.02		.65**	.34**	-.57**	.59**	-.34**	-.55**	.53**	.29**
6	Social distance	.43**	-.60**	-.17**	-.04	.62**		.40**	-.68**	.66**	-.54**	-.63**	.59**	.40**
7	Cultural distance	.25**	-.35**	-.15**	-.01	.41**	.48**		-.40**	.37**	-.27**	-.29**	.39**	.22**
8	Behav. intentions	-.35**	.52**	.08	.07	-.59**	-.72**	-.52**		-.55**	.51**	.59**	-.49**	-.33**
9	Social competition	.29**	-.38**	-.13**	-.01	.45**	.53**	.43**	-.45**		-.44**	-.58**	.60**	.34**
10	Contact quality	-.23**	.32**	.07	.12*	-.24**	-.47**	-.26**	.41**	-.23**		.50**	-.39**	-.38**
11	Positive emotions	-.32**	.52**	.20**	.02	-.55**	-.66**	-.39**	.61**	-.45**	.47**		-.58**	-.39**
12	Negative emotions	.44**	-.53**	-.15**	.05	.56**	.65**	.40**	-.51**	.44**	-.34**	-.60**		.39**
13	Intergroup anxiety	.24**	-.31**	-.05	-.05	.31**	.45**	.31**	-.35**	.30**	-.34**	-.44**	.43**	

Note: behav. = behavioral; correlations in the upper half of the matrix refer to Time 1, those in the lower half to Time 2.

Table 13b. Intercorrelations between the main variables within the sample of separately identified minority members in Study 3

		1	2	3	4	5	6	7	8	9	10	11	12	13
1	Own-adopt		-.36**	.02	.17	-.36**	-.48**	-.34**	.40**	-.21*	.48**	.44**	-.35**	-.12
2	Own-maintain	-.13		.23*	-.32**	.45**	.24*	.30**	-.21*	-.06	-.29**	-.26**	.28**	-.03
3	Meta-adopt	-.04	.19		-.06	.34**	.09	.32**	-.10	.16	.04	-.10	.15	.15
4	Meta-maintain	.21*	.02	-.31**		-.06	-.13	-.10	.13	-.21*	.13	.14	.04	-.04
5	Ingroup bias	-.37**	.31**	.26*	-.26*		.32**	.45**	-.27**	.05	-.14	-.38**	.48**	.00
6	Social distance	-.53**	.21*	-.05	-.14	.40**		.39**	-.55**	.21*	-.58**	-.47**	.19	.16
7	Cultural distance	-.33**	.08	.17	-.39**	.38**	.39**		-.48**	.27**	-.31**	-.31**	.44**	.08
8	Behav. intentions	.58**	-.21*	-.13	.25*	-.55**	-.53**	-.53**		-.25*	.45**	.54**	-.46**	.01
9	Social competition	-.16	.22*	.14	-.29**	.20	.29**	.43**	-.32**		-.32**	-.15	.13	.21*
10	Contact quality	.48**	-.12	-.08	.16	-.20	-.50**	-.30**	.41**	-.16		.34**	-.19	-.20
11	Positive emotions	.44**	-.25*	-.20*	.21*	-.48**	-.50**	-.50**	.61**	-.31**	.35**		-.53**	-.16
12	Negative emotions	-.08	.15	.27**	-.01	.25*	.21*	.20	-.09	.10	-.14	-.28**		.09
13	Intergroup anxiety	-.11	-.07	-.05	.27**	-.07	.12	-.11	.02	.02	-.15	.04	.11	

Note: behav. = behavioral; correlations in the upper half of the matrix refer to Time 1, those in the lower half to Time 2.

Table 13c. Intercorrelations between the main variables within the sample of merged minority members in Study 3.

		1	2	3	4	5	6	7	8	9	10	11	12	13
1	Own-adopt		-.08	.28*	-.07	-.34**	-.29*	-.09	.48**	-.07	.34**	.22	-.06	-.26*
2	Own-maintain	-.26*		.03	.22	.30*	.10	-.01	-.15	-.25*	-.02	.15	.08	.01
3	Meta-adopt	.15	.19		-.36**	-.07	-.42**	.12	.24	-.12	.12	.01	-.07	-.16
4	Meta-maintain	-.02	.00	-.41**		.13	.24*	-.52**	-.07	-.08	.29*	.22	.11	-.19
5	Ingroup bias	-.51**	.08	.22	-.26*		.35**	.17	-.39**	.05	-.25	-.16	.26*	.04
6	Social distance	-.39**	.14	-.18	-.12	.40**		-.08	-.43**	.22	-.18	-.21	.23	.13
7	Cultural distance	-.14	-.06	.10	-.22	.31*	.13		-.31*	.41**	-.33*	-.38**	.14	.11
8	Behav. intentions	.49**	-.11	.15	-.05	-.44**	-.45**	-.24		-.15	.39**	.23	-.21	-.02
9	Social competition	-.02	-.10	.17	-.21	.15	.23	.20	-.22		-.02	-.45**	-.02	.12
10	Contact quality	.23	.04	.19	.14	-.21	-.38**	-.02	.25	-.02		.21	-.19	-.55**
11	Positive emotions	.31*	-.25*	-.26*	.09	-.50**	-.22	-.29*	.47**	-.29*	.24		-.26*	-.35**
12	Negative emotions	-.32**	.11	.04	.00	.34**	.19	.04	-.29*	.42**	-.10	-.49**		.14
13	Intergroup anxiety	-.15	.06	-.24*	.09	.10	.28*	-.15	-.05	-.12	-.34**	.04	.04	

Note: behav. = behavioral; correlations in the upper half of the matrix refer to Time 1, those in the lower half to Time 2.

Main Analyses

Objective and subjective perspective divergence

As in the previous two studies, we analyzed whether minority and majority differed in their superordinate group representations, i.e. in their preferences for cultural adoption versus maintenance, and we also tested whether both groups subjectively perceived that their outgroup had preferences divergent from their own. Parallel to the first two studies, a quotient score of relative adoption was computed by dividing group members' (perceived) preference for cultural adoption by their (perceived) preference for cultural maintenance.

First, we conducted a 2 (status: majority vs. minority) x 2 (perspective: own vs. meta) mixed-model ANOVA with repeated measures on the second factor. As can be seen in Figure 9, objective disagreement was apparent such that majority members had a much stronger relative preference for adoption while minority members showed a relative preference for cultural maintenance (please note that the relative scores all significantly differed from 1, the value at which both preferences are equally strong, all $|t|$s ≥ 2.18, all ps $\leq .031$). Moreover, as expected, this divergence was subjectively reflected as such by both groups. However, while majority members accurately perceived the minority's preference, minority members overestimated the degree to which the majority preferred cultural adoption over maintenance.

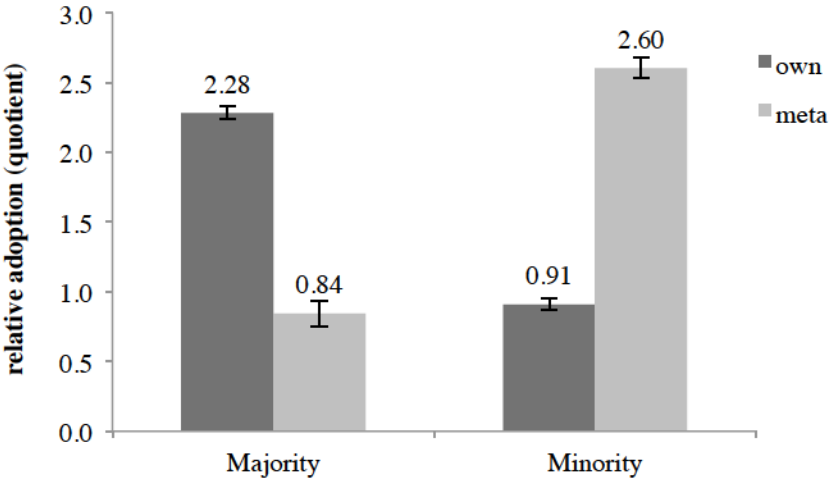

Figure 9. Mean differences in own and attributed preferences for relative adoption as a function of group membership in Study 3.

In order to examine whether the effects of the relative acculturation scores were due to group members' preference for adoption or maintenance, we then proceeded with a 2 (status: majority vs. minority) x 2 (perspective: own vs. meta) x 2 (preference: adoption vs. maintenance) mixed-subjects ANOVA with repeated measures on the latter two factors. Except for the three-way interaction, all main effects and two-way interactions were significant, Fs $\geq$ 20.52, ps $<$ .001, η^2s $\geq$ .031. As can be seen in Table 15, in line with our predictions, majority and minority members had divergent and strong preferences for cultural adoption and cultural maintenance, respectively, thereby objectively diverging on both preferences.

The analysis additionally shows that while both groups were accurate with respect to their outgroup's maintenance preference, majority members exaggerated the extent to which minority members did not want to adopt, and minority members overestimated the degree to which the majority wanted the minority to adopt. In other words, both groups' perceived disagreement with respect to their preferences for cultural adoption was greater than the actual divergence between the groups, due to biased attributions and/or socially desirable own preferences on behalf of both majority and minority members.

Table 15. Means (and standard deviations) of own and attributed preferences for cultural adoption and maintenance as a function of group membership in Study 3.

	own				meta			
	adoption		maintenance		adoption		maintenance	
Majority	4.09_a	(0.78)	2.27_c	(0.96)	2.70_d	(1.01)	3.90_a	(0.99)
Minority	3.29_b	(1.06)	4.03_a	(0.89)	4.42_e	(0.80)	2.16_c	(1.08)

Note: Significant mean differences (ps $<$ .05) are indicated by different subscripts.

Additionally, we also examined whether the pattern of own and attributed acculturation preferences differed within the minority, i.e. between merged and separate identifiers. The respective 2 x 2 ANOVA on the relative adoption scores showed that while both groups did not differ with respect to the relative preference attributed to the outgroup, separate identifiers had significantly less relative preference for relative adoption (M = 0.77, SD = 0.40) compared with merged identifiers (M = 1.12, SD = 0.67), $F(1,162) = 17.47$, $p < .001$, η^2 = .10. In fact, testing the means against 1 (the value at which both preferences are equally strong) indicated that separate identifiers had a relative preference for cultural maintenance,

$t(96) = -5.88$, $p < .001$, while merged identifiers' mean did not differ from 1, indicating that both preferences were equally strong.

Longitudinal prediction of change in intergroup relations

A multiple regression approach was used to investigate the longitudinal effects of own and attributed acculturation preferences. Specifically, we tested whether own and attributed preferences for cultural adoption and cultural maintenance – both in relative terms (quotient scores) and in absolute terms (single scores) at time 1 predicted intergroup outcomes at time 2, controlling for the stability of the outcome variable (i.e., its measurement at time 1). For both majority and minority samples, only the significant effects will be reported. The complete results of all regression analyses can be found in Tables C5 and C6 of the Appendix for the majority, and in Tables C7 and C8 for the minority.

Majority sample

For the sake of simplicity, we will focus on the results for the relative (quotient) scores, and additionally indicate the significant contributions of the single scores (adoption vs. maintenance).

Intergroup attitudes and emotions. While majority members' own relative preference for more cultural adoption consistently predicted less positive intergroup outcomes, with $.11 \leq |\beta| \leq .25$, $ps \leq .024$, none of these dependent variables were affected by the acculturation preferences attributed to the minority. With the exception of ingroup bias where the effect of relative adoption was due to preference for cultural adoption leading to more ingroup bias, $\beta = .09$, $p = .037$, preference for cultural maintenance always explained at least equal, mostly more variance than cultural adoption, with significant effects ranging between $.10 \leq |\beta| \leq .19$, $ps \leq .042$, and between $.02ns \leq |\beta| \leq .12$, $ps \leq .682$ respectively.

Intergroup anxiety. Changes in intergroup anxiety were predicted both by own and attributed relative preferences for adoption. Specifically, greater preference for adoption over maintenance lead to higher intergroup anxiety, $\beta = .18$, $p < .001$, and attributing low relative preference for adoption to the minority also lead to higher levels of intergroup anxiety, $\beta = -.09$, $p = .021$.

Additional analyses: Acculturation preferences vs. demands

We also examined whether the effects of majority members' own and attributed acculturation *demands* were similarly straightfoward as their respective acculturation *preferences*. In line with the findings using acculturation preferences as predictors, the analyses using cultural adoption vs. maintenance demands likewise showed that, as expected, only majority members' own perspective, but not the one attributed to the minority, influenced intergroup outcomes over time.

Yet, the pattern of results using the single rather than the quotient indices also showed differences between preferences and demands with respect to the predictive value each acculturation dimension taken separately. Specifically, whereas the cultural maintenance dimension was the dominant predictor of group members' *preferences*, the *demand* for cultural adoption (rather than cultural maintenance) was the only predictor over time for attitudes, bias, and prejudice measures, with effects ranging from $.10 \leq |\beta| \leq .23$, $ps \leq .010$. Both acculturation dimensions were equally strong predictors with respect to intergroup emotions, $|\beta|s \geq .12$, $ps \leq .002$ for cultural adoption and $|\beta|s \geq .10$, $ps \leq .009$ for cultural maintenance. As an exception, insistence on cultural maintenance was the only predictor for intergroup anxiety, $\beta = -.14$, $p = .001$.

Minority sample

Unlike for the majority, but similar to the minority findings in Study 2, analyses using the relative scores yielded no significant effects on the majority of the dependent variables. Therefore, we will only report the analyses using the single indices. Moreover, we found that own and attributed acculturation *preferences* yielded less reliable and a quite inconsistent pattern of results among merged identifiers. At the same time, acculturation *demands* revealed much more consistent findings for this subsample. Thus, for the sake of simplicity, we will focus on acculturation *preferences* for the separately identified minority, and on acculturation *demands* when it comes to the merged identifiers. The complete regression analyses can be found in Tables C7 and C8 of the Appendix. As in Studies 1 and 2, due to the relatively small sample sizes, effects at $p < .10$ will be considered substantial, and will therefore reported and interpreted.

Separate minority

Intergroup attitudes and emotions. The conviction that majority members did not want the minority to maintain their culture predicted changes in ingroup bias, β = -.25, p = .022, cultural similarities, β = .17, p = .090, and in behavioral intentions, β = .20, p = .024. These effects appeared over and above group members' own preference for cultural adoption, which predicted changes in ingroup bias, β = -.21, p = .067 and behavioral intentions, β = .38, p < .001, but also more positive emotions, β = .25, p = .019. No effects on contact quality were observed. Regarding the effects of acculturation demands, perceiving the majority to insist on *not* maintaining their heritage culture lead to less positive behavioral intentions, β = .17, p = .070, and when separate identifiers demanded they should adopt the mainstream culture, their negative emotions increased, β = .17, p = .068.

Intergroup anxiety. Over and above own preferences for cultural adoption tending to reduce intergroup anxiety, β = -.17, p = .077, interestingly, perceiving that the majority wanted the minority to maintain their culture predicted *more* intergroup anxiety, β = .25, p = .010. The same effect was observed for attributed insistence of cultural maintenance, which was likewise related to more intergroup anxiety, β = .19, p = .058.

Merged minority

Intergroup attitudes and emotions. Merged identifiers' own and attributed *preferences* for cultural adoption and maintenance were unrelated to their intergroup attitudes, all |t|s < 1.33, *ns*. Regarding the prediction of intergroup emotions, only less preference for cultural maintenance lead to changes in positive emotions, β = -.31, p = .012. However, examining the prediction of intergroup outcomes by group members' own and attributed adoption vs. maintenance *demands* revealed that insistence on adoption lead to reduced ingroup bias, β = -.31, p = .019, and to more cultural similarities, β = .25, p = .058, while behavioral intentions were more positive when merged identifiers believed that the majority insisted that the minority should not maintain their culture of origin, β = -.20, p = .095. Changes in intergroup emotions were both only predicted by greater insistence on cultural adoption, β = .25, p = .054 and β = -.25, p = .061, for positive and negative emotions, respectively.

Intergroup anxiety. Attributed preference for adoption predicted lower intergroup anxiety, β = -.31, p = .009. With respect to acculturation demands, intergroup anxiety was greater the more that merged identifiers insisted *not* to adopt the mainstream culture β = .28, p = .020.

Causal directionality between own and attributed acculturation preferences and demands

To investigate the causal directionality between group member's own perceptions and the perceptions attributed to the outgroup, we took a cross-lagged regression approach (Cook & Campbell, 1979; Rogosa, 1980) illustrated in Figure 10. Accordingly, own acculturation preferences at the second time point t2 were regressed on attributed acculturation preferences at the first time point t1 (cross-lagged influence), controlling for the stability of own acculturation preferences over time. Then, to assess bi-directionality, attributed preferences at t2 were regressed on own preferences at t1, controlling for attributed preferences at t1. Separate analyses were conducted for the cultural adoption and cultural maintenance dimensions. Moreover, we also examined the bi-directional influences of preferences and demands.

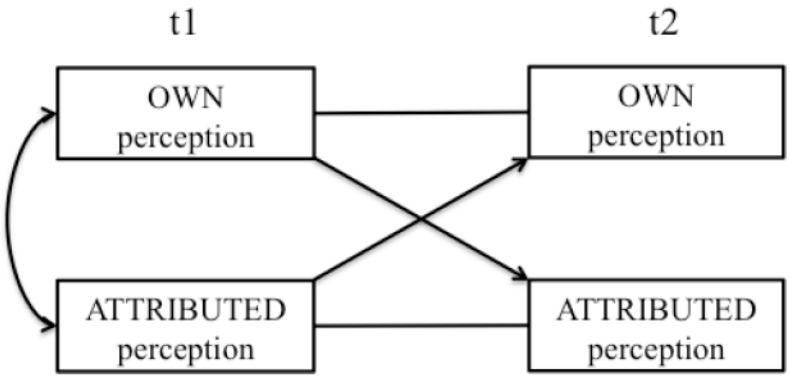

Figure 10. Cross-lagged regressions of own- and attributed acculturation preferences.

Consistent with experimental evidence (see Brown & Zagefka, 2011) and our prediction, within the majority, group members' meta-perception of how much they believed the minority preferred to adopt seemed to causally influence their own perceptions, rather than vice versa. As such, believing that the minority did not want to adopt resulted in an increased preference that they should adopt, $\beta = -.07$, $p = .064$, and a stronger insistence that they have to adopt, $\beta = -.10$, $p = .020$ while the reverse effects were not significant, both $|t|s < 1.$, ns.

Within separate minority members, only one effect was significant. In line with our expectation, their own insistence on maintaining their heritage culture became more pronounced when they believed that the majority did not want them to maintain, $\beta = -.21$, $p = .022$. Conversely, none of the directional effects reached significance among merged identifiers, all $|t|s < 1$, *ns*.

3.3.3 Discussion

This third study provided further support not only for the different perspectives of minority and majority members on their superordinate group, but also with respect to the impact of own- and meta-representations of the superordinate group in terms of acculturation orientations.

Regarding the mean differences in acculturation preferences, Study 3 again replicated the pattern found in the first two studies. Majority members showed a strong preference for cultural adoption over maintenance, while thinking (and knowing) that the minority had the opposite preference. In turn, minority members were aware of the majority's preference that clearly differed from their own preference for cultural maintenance over adoption. The additional finding that within the minority, only separate identifiers showed a clear relative preference for cultural maintenance, while merged identifiers' preferences for adoption and maintenance were equally strong, corroborates the distinction between these identification types (e.g., Hutnik, 1991) and the greater focus on the minority ingroup among separate identifiers as opposed to also emphasizing belongingness to the majority or superordinate group among merged identifiers (e.g.,Verkuyten, 2005b).

With respect to the prediction of intergroup outcomes, the analyses consistently showed that majority members were, with the exception of intergroup anxiety, influenced *only* by their own orientations, but not by those attributed to the minority. Specifically, in line with recent evidence (Verkuyten, 2011; Zagefka et al., 2009), a stronger preference for assimilation, i.e., relatively more cultural adoption than maintenance, consistently affected intergroup outcomes in a negative way. Importantly, these effects were generally due to the cultural maintenance more than the cultural adoption dimension. Thus, it appears that the question of cultural maintenance was of higher relevance than how much the minority should adopt the majority's culture. Possibly, from the perspective of the majority respondents, the idea of cultural adoption was more open to interpretation of what adoption means and implies: Will it only be the national language that is learnt, and how much of the mainstream culture will be adopted? Does adoption mean integration or pure assimilation? Conversely, indicating a preference for cultural maintenance is a clear statement that a new element will be present in the larger society, which directly implies that society itself and, possibly, the majority along with it will have to change (Zárate & Shaw, 2010). This could explain why the majority's willingness to accept or reject such change brought about by the minority's culture was a more powerful predictor of more or less harmonious relations than their status quo

preference reflected by the cultural adoption dimension. Still, our examination of majority members' acculturation demands revealed that *insistence* on adoption predicted changes over time much more than insistence on cultural maintenance. What may reconcile these apparently contradictive findings is that the yes/no answer format forced participants to make a clear decision also on the adoption dimension, which we have just argued to otherwise be more open to interpretation. Thereby, this format may have been a stronger predictor because it pronounced the differentiation between those to whom cultural adoption was a 'must' and those who did not insist.

Concerning the role of attributed preferences, majority members appeared to realize that preferences between both groups diverged, yet meta-perceptions were generally unrelated to changes in intergroup outcomes over time. Importantly, these findings do not necessarily contradict the evidence of Study 1 and 2, as well as other previous research suggesting a link between majority members' meta-perceptions and intergroup outcomes (e.g., Brown & Zagefka, 2011; Frey & Tropp, 2006). In fact, the cross-sectional correlational patterns clearly show significant correlations between majority members' attributed preference for adoption and intergroup outcomes (though these correlations are substantially weaker than those involving own preferences). At the same time, these relations did not hold over time, where the strongest causal influence was the extent to which majority members wanted or did not want the minority to maintain their heritage culture. This suggests that though majority members' evaluation of the intergroup relation is not independent of their belief regarding the minority's willingness to adopt, changes in the intergroup relation seem to be initiated by their own belief of how much the minority can maintain or should abandon their heritage culture. Future research should follow this potential mediating role of group members' own preferences more closely.

One optimistic way to interpret the lack of longitudinal influence of majority member's attributed preferences is that the minority's perspective was not (or no longer) threatening over time, except with respect to proximal variables such as the expected experience of negative emotions during an interaction with minority members. In light of majority members' rather accurate perception that the minority had a different preference to their own, it seems that the different perspectives are realistically recognized. The data show that what initiates positive change over time is a reduced insistence that the minority has to adopt coupled with a stronger wish to let the minority maintain their culture.

However, we found some indication that though the perceived minority perspective is not what directly changed majority members' attitudes over time, it did influence their own

preferences and demands regarding the larger group, again suggesting a potential indirect effect of meta-representations via own representations. Believing that the minority wanted to adopt more lead to a reduction in majority members' own preference for and insistence on cultural adoption. Thus, efforts on behalf of the minority may positively impact to some extent, at least when it comes to believing that the minority wants to adopt more. Yet, a downside of these results should not be left unmentioned: the wish for cultural maintenance that especially highly identified minority members struggle so hard with appear to be left unheard by the majority, as what the minority is believed to want regarding the recognition of their minority culture and identity had no influence on majority members' attitudes and emotions over time.

The lack of longitudinal influence of majority members' attributed acculturation preferences may also in part be due to the stronger motivational foundation of *ideal* preferences relative to *actual* perceptions (Higgins, 1987; see also Berthold et al., 2012). As such, group members' ideal representations may have facilitated a clear distinction between their own wishes and those attributed to the outgroup. In the case of the majority, group members' own preferences were apparently such a strong motivational driving force that the explanatory value of the orientations attributed to the outgroup diminished in influencing intergroup outcomes over time. Moreover, different from actual states that represent a status quo, ideal representations that do not come from the ingroup but are attributed to the minority outgroup may be interpreted as less acute and therefore less relevant. In sum, it seems that the psychological processes proposed by the social power account play out most when it comes to stronger motivational states: the powerful give preference to their own goals and can afford to neglet those of the powerless. In complement, the dependency-oriented mindset of those in a position of low power, such as the separately identified minority, likewise appears to come to the fore especially with respect to goal-directed states, as we will discuss next.

With respect to minority members, it again proved crucial to differentiate between separate and merged identifiers. Specifically, as predicted, separate identifiers' intergroup outcomes were almost exclusively influenced by how much they believed the majority let them maintain their own culture. Conversely, merged identifiers were predominantly affected by how much they themselves insisted to adopt the mainstream culture. In other words, while it was best and most important for separate minority members to believe that the majority accepted cultural maintenance, merged identifiers' perception of the intergroup relation became more positive when the conviction that the minority had to adopt was strong. As mentioned, separate minority members' emphasis on cultural maintenance stands in stark

contrast to majority members' neglect of this wish. Not only was the strongest influence over time the extent to which separate identifiers believed that the majority let them maintain their culture, but they also experienced more negative emotions when they thought they had to adopt the mainstream culture. Conversely, the pattern for merged identifiers almost perfectly matches the acculturation goals of the majority, as more positive attitudes and emotions resulted from their own demand to adopt the majority's culture.

Together, these findings are much in line with the social identity threat account and clearly support the hypothesized differential emphasis on minority recognition and belongingness to the majority for separate and merged identifiers, respectively. Potentially, this distinction was most pronounced in this study because the category of merged identifiers was composed of both 'true dual' identifiers (high subgroup and superordinate group identification) and 'assimilated' minority members (high superordinate group but low subgroup identification). In addition, as already mentioned above, the stronger motivational underpinnings of ideal / ought relative to actual representations may also have contributed to this clear distinction (Higgins, 1987) and lend support to the social power account that, at least in goal-motivated situations, dominant majorities take an egocentric perspective while dependent minorities are strongly influenced by their outgroup perspective.

Notably, among merged identifiers only *demands* (ought states) much more than *preferences* (ideal states) functioned as antecedents of intergroup attitudes, while the reverse pattern was observed among separate identifiers. Although not specifically predicted, Higgins' (1987) self-discrepancy theory may again help to explain these findings. According to this theory, actual-ought discrepancies elicit more agitation-related emotions such as threat or fear, while actual-ideal discrepancies are associated with dejection-related emotions such as disappointment. In this view, ought states convey more intensity and their relevance in predicting intergroup outcomes might reflect merged identifiers' fear that the minority in general does not want or is not ready to adopt the majority culture as much as they would like the minority to. Merged identifiers' insistence may also reflect the threat or vulnerability associated with not being perceived as completely belonging to the majority implied by less cultural adoption, an aspect that will be further pursued in the General Discussion.

Interestingly, among both separate and merged identifiers, more intergroup anxiety was predicted by the belief that the majority actually *insisted* that the minority maintain their culture. While we would have expected the opposite direction, believing that the majority insists on cultural maintenance on behalf of the minority may be interpreted as being viewed in inflexible and stereotypical terms. We know that feeling categorized or stereotyped hinder

successful intergroup interactions (e.g., Ellemers & Barreto, 2006; Vorauer & Kumhyr, 2001), and one reason for this are the negative emotions or intergroup anxiety involved (Stephan & Stephan, 1985; Stephan et al., 2002; Voci & Hewstone, 2003). Notably, for merged identifiers, the strongest effect to reduce intergroup anxiety was the belief that the majority wanted the minority to adopt more. Given that this belief was in line with their own goals, this supports research that common goals and shared experiences are beneficial to intergroup interactions (Pettigrew, 1998).

With respect to the reciprocal causal relation between group members' own and attributed preferences, we had expected meta-perceptions to longitudinally affect minority members' own perceptions, based on previous cross-sectional studies with majority groups (Tip et al., 2012; Zagefka et al., 2007). Yet, evidence for this relationship over time was only found within the separate minority. Specifically, separate minority members' own insistence to maintain their heritage culture increased as a consequence of the belief that the minority wanted them to maintain less. For merged identifiers, no significant causal effects were found – potentially due to the lower sample size, but also the greater heterogeneity in this combined group of 'integrators' and 'assimilators'.

Finally, we would like to point out again that the variability of the minority data somewhat limits their interpretability. Not only were some scale reliabilities rather low, but we also found some striking differences in the correlational pattern between the two waves. The relatively small sample size may be one reason. Another more general problem may be the greater psychosocial diversity of ethnic minorities (Okazaki & Sue, 1995). The differentiation between two types of identifiers may have helped to reduce this problem, yet not in an exhaustive and entirely satisfying way.

4 General Discussion

4.1 Overview

In the overall goal of the present dissertation, we aimed to introduce subgroup members' meta-representations of the superordinate category as a crucial process by which intergroup relations can be evaluated. In this vein, we argued that while the ingroup perspective often is the default perception, group members' meta-perception is the relational element that guides intergroup evaluations through the subjectively assumed perspective of the outgroup. Following a social identity threat account, we proposed that meta-perceptions of the superordinate category predict group members' intergroup attitudes to the extent that one's belief regarding how the outgroup represents the subgroups' relative positions within the superordinate group poses an identity threat to one's subgroup. Specifically, we hypothesized that believing that the outgroup perceives or claims more relative prototypicality for themselves within the superordinate group poses a threat to majority members' superior status quo, and believing that the outgroup does not sufficiently recognize the ingroup as (also) being prototypical threatens highly identified minority members' sense of inclusion into or recognition within the superordinate group. Therefore, we expected meta-perceptions of lower (relative) ingroup prototypicality to negatively impact on intergroup relations.

A second goal was to show that the way minority group members are identified with their sub- and superordinate group determines whether and in which direction own- and meta-perceptions of the superordinate group impact on intergroup evaluations. We reasoned that separate identifiers, i.e. those with a strong focus on their minority ingroup, should base their intergroup evaluations on the perspective attributed to the majority, because they are likely to perceive their ingroups' position or existence within the larger group to be threatened by the majority. Conversely, we argued that intergroup evaluations among merged identifiers within the minority are mainly predicted by their own perception, primarily due to the fact that merged identifiers are more familiar and comfortable with and thus not threatened by the majority's perspective. We further argued that, if at all, the attributed majority perception negatively affects merged minority members only to the extent that it threatens their motivation to be considered as 'full' members of the larger society.

In short, we predicted that separate minority members' meta-perception of a marginalized ingroup position – both in terms of prototypicality and acculturation – negatively affects intergroup evaluations, while own perceptions of a relatively stronger position of the majority

within the superordinate group predicts intergroup evaluations among merged minority members. All three studies generally supported these hypotheses.

4.2 Objective and subjective perspective divergence

We had also proposed not only to replicate the objective perspective divergence between majority and minority members both regarding their prototypicality perceptions and their acculturation perceptions (Waldzus et al., 2004; Arends-Tóth & Van der Vijver, 2003), but also that this divergence would be subjectively represented within group members. Specifically, based on research on attributional biases (Pronin, 2007; Ames, 2004; Judd et al., 2005; Yzerbyt et al., 2009) we had reasoned that group members subjectively exaggerate the objective differences between the groups.

First, the findings that the Turkish minority and the German majority samples in Studies 1 and 2 objectively disagreed over the extent to which the Germans were more relatively prototypical are much in line with assumptions of the IPM (Mummendey & Wenzel, 1999 already supported by previous research (e.g., Waldzus et al., 2004), and thereby emphasize the model's applicability to ethnic minority-majority intergroup relations (Kessler et al., 2010). The corresponding objective disagreement over assimilation versus multiculturalism as preferred acculturation goals found in Study 3 replicates previous evidence within the acculturation frameworks (Bourhis et al., 1997), and corroborates the perspective that the concepts of relative prototypicality and acculturation preferences at least partially overlap in that they both express group members' idea of their common superordinate group. This objective perspective divergence found across studies between majority and minority groups may reflect intergroup tensions, and indicate conflict over the larger society's attributes (Kessler & Mummendey, 2009), and the differential power of the subgroups to define and reside over these attributes.

Second, group members not only objectively but also *subjectively* represented this disagreement with respect to relative prototypicality, which was uncovered by the present Studies 1 and 2 for the first time and is again convergent with Study 3, as well as with previous evidence showing that subjective disagreement over the desired definition of the larger group in terms of acculturation preferences exists (Zagefka & Brown, 2002; Geschke et al., 2010). In line with the finding that greater subjective discordance of superordinate group representations leads to pereptions of threat (e.g. Piontkowski et al., 2002), we interpret the subjective perspective divergence regarding the subgroups' relative prototypicality as well as their relative preferences for assimilation evident in both minority (Studies 1 to 3) and

majority members (Studies 2 and 3) as indicating threats to the ingroup's position within the superordinate group, i.e. to the minority's recognition and to the majority's superiority. More precisely, subjective perspective divergence in Study 3 was strong and evident in both groups with respect to both the cultural adoption and the cultural maintenance dimensions. The stronger motivational underpinnings of ideal preferences (Study 3) relative to actual perceptions (Study 1 and 2) may have contributed to the greater differences in means, both within and between the groups (see also Berthold et al., 2012). It is therefore not surprising that the pattern observed in the first two studies was somewhat less pronounced.

Highly similar in both Study 1 and 2, the subjective perspective divergence on relative prototypicality specifically concerned their perceived prototypicality of the minority. Relative to their own perceptions, minority members attributed less and majority members more prototypicality of the minority to their respective outgroup. In contrast, across both studies and samples, no subjective divergence was perceived with respect to the majority. Apparently then, high prototypicality of the majority seems an immovable or stable fact – in the eyes of both groups. The rather invariable superiority of the majority is potentially due to reality constraints associated with this host-immigrant context (but see Waldzus et al., 2004, for a different pattern in a different minority-majority relation). Thus, what seems open to debate for the two groups is the position of the minority. A potential source of conflict from the perspective of the minority is their perception that the majority does not adequately recognize the ingroup within the superordinate category (see also Blackwood, Hopkins, & Reicher, 2012; Hopkins, 2011), for related qualitative evidence), rather than being threatened by the majority's claim for greater influence within the shared larger group. Conversely, too much minority prototypicality is what might become threatening to majority members' status quo, especially if increasing minority prototypicality implies relatively lower majority prototypicality such that the existing majority-dominated prototype will have to be re-defined to also incorporate minority elements. However, only the regression data discussed next will be able to shed some light on whether attributed lower ingroup or higher outgroup prototypicality is the threatening aspect that goes hand in hand with more detrimental intergroup relations.

4.3 Meta-perceptions as identity threats and the role of social power

The most central proposition underlying this work is that the outgroup perspective as it is subjectively perceived by ingroup members can be conceptualized as an identity threat that negatively impacts on the intergroup relation, over and above group members' own

perception. Accordingly, the present research was able to show for the first time that the distinct influence of meta-perceptions on intergroup evaluations, emotions, and prejudice also hold with respect to the superordinate group level, among both majority and minority members, complementing existing evidence on the subgroup level, i.e. in intergroup interaction settings (e.g., Frey & Tropp, 2006; Shelton et al., 2006). Moreover, our research has disentangled that the impact of discordant superordinate group representations previously shown (e.g., Piontkowski et al., 2002) is differentially driven by one's own perception or the perception attributed to the outgroup depending on group membership and identification type. We will discuss the implication of our findings separately for the majority and the two groups within the minority in order to both extract their differential psychologies and to subsequently draw an integrative picture and conclusion.

The majority

For majority members, in line with the ideas that relative to powerless groups such as immigrant minorities powerful majority members take a more egocentric stance (Fiske, 1993; Keltner et al., 2003; Galinsky et al., 2006) and perceive their position to be more secured (Stephan et al., 2002; Verkuyten & Reijerse, 2008), it appears that their own view is the motor that drives the effects on intergroup outcomes (Studies 1 to 3), especially with respect to motivated states such as acculturation goals (Study 3).

Yet, this does speak against the social identity threat account that majority members' meta-perceptions negatively affected intergroup outcomes. Instead, two aspects strongly support this perspective. First, discrepant meta-perceptions increased the links between superordinate category representations and intergroup evaluations (Study 1 and 2). In particular, believing that the minority did not want to assimilate to a prototype defined more in terms of the majority was related to more negative attitudes and emotions, as expected from the social identity threat perspective. Second, we also approached the question of whether the outgroup perspective is indirectly taken into account by influencing group members' own representations. In this regard, we were able to show that the extent to which the minority was believed to want adoption changed majority members' own preferences over time, rather than vice versa, as speculated by Brown and Zagefka (2011) and cross-sectionally tested by Zagefka and colleagues (Zagefka et al, 2007; Tip et al., 2012). Specifically, majority members wanted and insisted on more adoption when they believed the minority wanted to adopt less. This demonstrates the crucial long-term impact that the subjective perceptions regarding one's outgroup view can have through the influence on

one's own perspective. Together, both aspects lend support for the idea of meta-perceptions as identity threats and emphasize that future studies should more directly test the mediating role of group members' own perceptions in determining the apparent indirect effects of their meta-perceptions.

Further, regarding the potentially differential processes underlying the effects of own- versus meta-perceptions, evidence that majority members' own representation of the superordinate group was related to beliefs legitimizing the social structure came from Study 1 and 2, replicating the respective predictions of the IPM (Weber et al., 2002). In turn, outgroup-oriented variables such as emotions directed at the outgroup and future chances of the outgroup to improve their standing within the superordinate group mediated the relation between meta-perceptions of relative ingroup prototypicality and outgroup evaluations (Study 1 and 2) and affected expectations of negative emotions during intergroup contact (Study 3). As such, the status enhancing and legitimizing beliefs that explain why higher relative ingroup prototypicality is related to more negative intergroup outcomes (Wenzel et al., 2007) seem to be complemented or supported by an additional emotional pathway triggered by the identity threatening perception that the outgroup perceives less relative ingroup prototypicality.

Thus, it seems as though the threat elicited by the perceived outgroup's representation is reflected in and fuels emotional reactions which subsequently produce negative outcomes for the intergroup relationship. Still, future research should investigate more thoroughly whether intergroup emotions and socio-structural considerations are differential mediators of group members' own perception and the perspective attributed to the outgroup, respectively, or whether these processes should rather be conceptualized as being sequential.

As we will see below, the pattern found in the majority was very different from those in the minority samples, supportive of our theoretical reasoning that own and attributed perspectives bear different meanings depending on group membership.

The separate minority

What the present studies clearly imply for the separately identified minority is that only one aspect matters: that the minority be recognized as an integral part of the common society, that they be included into the superordinate group (i.e. to be seen as prototypical and being able to maintain their culture) *by the dominant majority*.

The perception that this is the case is likely to improve not only outgroup attitudes, but also potentially entails less radical religious beliefs, less conservative political opinions, and

stronger identification with the superordinate group – i.e. commitment to the norms and values of the larger society as opposed to a more narrow view that exclusively concentrates on the subgroup. This latter finding is encouraging in light of evidence that, especially among the separately identified, commitment to the superordinate group in addition to subgroup identification is an important prerequisite for normative politicization as opposed to radicalization (Simon & Ruhs, 2008), and for more harmonious intergroup relations in general (Gaertner & Dovidio, 2000; Gonzalez & Brown, 2006; Hornsey & Hogg, 2000). Moreover, as religious beliefs have recently been shown to influence radicalization (religious fundamentalism and distance towards democracy) over time among young Muslims in Germany (Frindte, Boehnke, Kreikenbom, & Wagner, 2012), the present research indicates that this tendency may be attenuated or fuelled depending on whether these minority members feel included and recognized.

Importantly then, for the more separately identified, it is not about their own ideas and wishes regarding the larger society, but it is about believing that the majority perceives higher prototypicality of the minority and lets them maintain their culture more. This means that minorities can prefer multiculturalism as much as they want; they know (or fear) that multiculturalism does not become reality unless the majority is willing to make room for minority elements within the shared group. Accordingly, much in line both the social power and the social identity threat accounts, we found across studies that for the separately identified minority, *not* outgroup prototypicality or cultural adoption were related to intergroup evaluations, but that attributed ingroup prototypicality and maintenance were the main driving forces. Moreover, that more negative meta-perceptions, namely the belief that the majority wanted the minority to maintain less, intensified separate minority members' own preference and insistence to maintain their heritage culture even more may serve as indicator of a defensive if not separatist reaction in response to this perceived threat to the ingroups' existence.

In sum, separate identifiers' focus apparently lies almost exclusively on the existence and recognition of the subgroup – and much less about the idea that the majority claims to reside over the definition of the superordinate group's norms and standards. If this implication holds, our evidence is encouraging for the goal to reconcile majority and minority members' concerns and needs, because it implies that separate identifiers' wish for more minority recognition must not necessarily imply less prototypicality of the majority. Instead, it could mean that the prototype of the superordinate group be changed in the direction of more complexity: without diminishing the majority's prototypicality, a richer and more

diverse prototype may be constructed that – in the eyes of both groups – consists of both majority and minority elements, and in which the minority could feel adequately represented. This idea is much in line with the IPM's conception of superordinate group complexity in terms of a *multimodal* prototypical dimension (Mummendey & Wenzel, 1999) or of multiple prototypes (Waldzus, 2010), which shows in the perception that both groups are (almost) equally prototypical, resulting in less intergroup discrimination. In the language of the IPM, this would imply that both subgroups are perceived as different, but not deviant (Mummendey & Wenzel, 1999).

Yet, separate identifiers' attributed perception regarding the outgroup's (as opposed to the ingroup's) standing in the larger group was not an entirely irrelevant predictor. Across Studies 1 and 2, the belief that the majority claimed a stronger position for themselves within the larger group was consistently related to perceptions of lower legitimacy of the intergroup relation. Interestingly, this link converges with what we found in the majority such that the same component – the position of the majority from the majority's point of view – determined how legitimate the social structure was perceived to be. This indicates that independent of their power and status, group members determine whether or not the social structure is justified from the relative position the majority claims for themselves. Thereby, they only follow the logic of social power: those in the powerful position decide over the fairness of the social system through the amount of resources and influence they reserve for themselves.

The merged minority

Though they categorize themselves as minority members, merged identifiers' belief system hardly corresponds to that of the separately identified minority. Instead, it closely parallels that of the majority: higher relative prototypicality of the majority, as seen from both perspectives, was overall related to more positive intergroup evaluations (Study 1 and 2), and their intergroup evaluations in Study 3 were purely based on their insistence to adopt the majority culture more, while cultural maintenance appeared not to be an issue.

Our findings also illustrate the constant switch in perspectives that these minority members eloquently manage. When in their majority identity, high majority prototypicality became important (Study 1), and when in their minority identity, high minority prototypicality positively reflected on the minority (Study 1 and 2). It seems that both perspectives, though leading to different or even opposing outcomes, are not conflictual for these individuals: ingroup and outgroup attitudes are both rather positive, as are

identifications with the subgroups as well as with the superordinate group (Benet-Martínez & Haritatos, 2005; Verkuyten, 2005b).

Studies 2 and 3 more clearly show that the main if not only predictor is merged identifiers' own perspective. Yet, due to the nature of their dual identities, we believe that merged identifiers' own perspective actually reflects a merged one that successfully integrates the perspectives of both groups. Thus, the merged appear to integrate both the majority's and separate minority's views and live what seems most adaptive: a clearly positive evaluation of the statement or fact that the majority is more relatively prototypical (from a majority perspective) while at the same time positively valuing minority elements within the superordinate group (from a minority perspective). In this sense, merged identifiers seem to have implemented what the separate minority struggles with: a complex representation of their superordinate group.

For these perhaps 'truly integrated' individuals, if anything is of concern to them, then it is to be perceived as 'one of us' in the more inclusive sense (see Zick et al., 2001). Indeed, despite their greater integration in the superordinate group, our data can also be interpreted such that merged identifiers are not entirely unvulnerable (see also Baysu, Phalet, & Brown, 2011). Specifically, what may be threatening to merged identifiers' integrationist view is when their efforts to become an integral part of the majority or larger society are perceived to be counter-acted by the majority. In other words, the more they put emphasis on being accepted as equal members of the larger group, the more any sign that this is not reciprocated by the majority may frustrate their efforts. As an indication, believing that the majority found the minority more relatively prototypical predicted less positive outgroup attitudes (Studies 1 and 2) and can be seen as reflected in the impact of their 'either - or' mentality expressed by their insistence on rather preference for adoption (Study 3).

This latter aspect could also in a different sense limit the idea that merged identifiers are the truly integrated. Though merged minority members overall endorsed cultural maintenance over cultural adoption, their insistence on adopting the host culture and language guided their intergroup evaluations and emotions. In other words, despite the fact that they seem to have a complex representation of the larger society, what merged identifiers pushed towards was more cultural adoption. One may conclude that this represents an assimilative rather than integrative standpoint, negative potential consequences of which include intra-minority tensions due to horizontal discrimination of fellow ethnic minorities (White & Langer, 1999), tokenism, legitimization of the existing system, but also individual risks such as being marginalized (Branscombe & Ellemers, 1998; Mummendey et al., 1999). Yet, the effects of

merged identifiers' insistence on speaking the national language and valuing the dominant culture do not allow to conclude in reverse that they want to give up their heritage language and culture. Instead, the missing link between orientations towards cultural maintenance and intergroup outcomes coupled with the weaker predictive power of ingroup than outgroup prototypicality (Study 2) may merely indicate that the minority is not their primary focus, matching their identity pattern. Moreover, following the argument that minimal standards convey judgments are made with more certainty (Brendl & Higgins, 1996), demanding adoption may rather reflect merged identifiers' knowledge that acquisition of the majority's language (and culture) is an almost objective prerequisite or 'must' if they want to succeed in the larger society. Possibly, their insistence may also be a call in the direction of fellow minority members to stress the importance of making compromises rather than fostering the development of parallel societies.

4.4 Implications for the study of intergroup relations

Taking together the psychologies of these three subgroups, what would benefit the intergroup relation? How can the majority's threat of status loss be turned into a perceived gain? And how can the minority's threat that the ingroup's inclusion is at stake be reassured? In other words, how can both sides of a majority-minority relationship constructively turn increasing diversity into organic pluralism (Haslam & Parkinson, 2005)?

One solution could be a 'meeting in the middle': Invigoration of the majority's greater relative prototypicality by the minority on the one hand, and explicit acknowledgement and recognition of the minority elements (that have already changed the larger group and will continue to do so in the future) by the majority on the other hand. Thus, rather than merely raising the majority's awareness that there are more subgroups than just them, visible and credible effort to increase minority prototypicality and giving the minority the chance to become more prototypical on the side of the majority may be needed (Hopkins, 2011). At the same time, minorities may have to signal willingness to live up to the core values and norms of the larger group. Further, it could help to make members of both subgroups focus first on those values and norms incorporated by the superordinate group that both subgroups share, before then coming to recognize and tolerate the distinct features of the subgroups (see also Moghaddam, 2008, for the related concept of omniculturalism). Importantly, this latter aspect speaks to both subgroups' apparent preference in our studies to have their subgroup seen as more prototypical by the outgroup.

Putting these ideas in the words of the IPM, the most promising route to intergroup harmony would, according to Mummendey and Wenzel (1999) and Wenzel and colleages (2008), be a more complex category that comprises different prototypes (whereby simple co-existence is not sufficient). Indeed, some studies have demonstrated positive effects of superordinate categories represented as complex (Waldzus, Mummendey, & Wenzel, 2005; Waldzus et al., 2003), and others have shown that a complex representation of the superordinate group reduces relative ingroup prototypicality (Machunsky, 2005; Peker, Crisp, & Hogg, 2010; Waldzus et al., 2003; Waldzus et al., 2005).

Yet, how can such complexity be implemented in the real world? Our simultaneous investigation of both the advantaged and the disadvantaged parties (leaving the role of merged minority members aside for a moment) leads us to assume that higher complexity may be difficult to achieve to equal satisfaction of both subgroups. Indeed, the present work indicates that dominant majority groups may tolerate less complexity than required in the eyes of subordinate minority groups. As a result, the majority may even more actively resist a change to the status quo when they perceive to be forced to diversity (Zárate & Shaw, 2010). On the other hand, extreme reactions can be expected from minority members, particularly those with a strong focus on their ingroup, who feel their group is pushed to the boundaries and not adequately represented within the shared group (Piontkowski et al., 2002; Geschke et al., 2012).

As such, just how much both majority and minority may have to adjust their (ideal) representations of the superordinate group appears to be a major issue to be negotiated between the groups. Open communication and exchange between the groups may be one strategy to respond to the differential concerns invoked by the respective outgroup, and ultimately reduce bias and threat, lead to a greater convergence between both perspectives, and thereby reduce intergroup tensions. In Germany, for example, media coverage that portrayed citizens with Turkish background (Frankfurter Rundschau, 2008) and gave voice to their wish to belong as well as their feeling to be unwanted (Lau, 2008) may have helped to convey a more differentiated and at the same time positive image to the general public.

However, even despite such attempts to direct attention to the outgroup's perspective, the problem of ingroup projection may persist, namely that either majority or minority continue to see themselves as more (relatively) prototypical than they are seen by their outgroup (Kessler & Mummendey, 2009). We know that the actual perspective of the outgroup is indeed taken into account when meta-perceptions are formed (Ames, 2004; DePaulo, Kenny, Hoover, Webb, & Oliver, 1987; Frey & Tropp, 2006; Kenny & DePaulo,

1993). At the same time, our studies substantiate evidence that members of both groups tend to be negatively biased when forming their meta-perceptions (Frey & Tropp, 2006; Yzerbyt et al., 2009). Taken together, this may imply that positive information coming from the outgroup might be short-lived, and possibly needs long-term substantiation in order to change individuals' attitudes – especially in a tense social climate marked by perceived illegitimate and/or unstable inequality. Regular summit conferences on integration, as initiated by the German government in 2006, where societal representatives from majority and minority sides come together on a yearly basis to instigate mutual agreement on the common societal norms and values may serve as example of a long-term (and often very conflictual) exchange process that may eventually be fruitful to the development of a more complex representation of 'the Germans'.

But sometimes, perspectives other than one's own (or that of the ingroup) are not heard and acknowledged at all. Following both the social power approach as well as social identity theory, attention to the outgroup's perspective may decrease, especially on behalf of the dominant group, with higher perceived security, i.e. high stability and high legitimacy, of the intergroup relation (Lammers, Galinsky, et al., 2008). As such, sending positive messages in times when dominant groups perceive the status inequality to be legitimate and stable may often remain unrecognized, which in turn should result in increasing frustration among subordinate group members who perceive the social system to be illegitimate and want social change. On the basis of this reasoning, the finding that meta-perceptions did predict intergroup outcomes among majority members in Studies 1 and 2 and influenced their own perceptions over time in Study 3 bears both the danger of intensifying intergroup conflict and the potential for more tolerance. Regarding the latter, given that the attributed minority's perspective was taken into account, it might be possible for the minority to influence and change the majority's own perspective in a more positive direction. Yet, Study 3 shows that this influence might be restricted to perceptions of assimilation and adoption, rather than responding to the wish that the minority's culture be more recognized.

Especially in light of the apparent assimilative preference shown by members of the majority, the downside of the effects of meta-perceptions could be that because the majority is likely to experience their outgroup perspective as threatening to their superior status, it is possible that any – even the most positive – new information attempted at changing the majority's image of the minority is assimilated to and thus interpreted in terms of the negative or threatening perception already formed. Of course, the same arguments should

hold for the interpretation of the majority's perspective in the eyes of the (especially highly identified) minority.

Together, our studies indicate that though one way of resolving intergroup conflicts may lie in the mutual exchange of perspectives, the positive outcome of corrected and less threatening meta-perceptions is not granted. Rather, group members' (mis)perceptions can also turn into hardened convictions prone to intensify tensions and conflict (Kessler & Mummendey, 2009).

4.5 The role of identification(s)

Our findings that the effects of both own- and meta-perceptions of (relative) prototypicality among minority members depended on their type of identification strongly calls for a more differentiated treatment of minority samples in future studies. While cross-cultural research has dealt with these different patterns of acculturation and identification at least since Berry's influential acculturation model (Berry, 1980, 1997), intergroup research has only recently started to take this moderator into account (Nguyen & Benet-Martínez, 2010).

Still, though the differentiation between separate and dual identifiers helped to extract two groups with quite different psychologies within the minority, both concept and operationalizations may not be able to fully capture the whole spectrum of minority members' identities. Along with our experience that many minority members felt uncomfortable when they had to categorize themselves along the dichotomy of Turkish versus German, qualitative research strongly suggests that minority members have plural or hyphenated identities (Nguyen & Benet-Martínez, 2010; Phinney, 2003; Roccas & Brewer, 2002; Verkuyten, 2005b). It should be highly informative for future social psychological research to develop an identification scale that taps on this increasingly relevant concept of 'plural identities' within ethnically and culturally diverse societies.

In the present work, we used different operationalizations to address minority members' types of dual identities. While we differentiated between high minority / low majority and low minority / high majority identifiers in Study 1, the relative opposition or combination between subgroup and superordinate identifications was taken in Study 2, and levels of subgroup and superordinate identifications differentiated between separate and merged identifiers in Study 3. Critically, this lack of specificity limits a clear conclusion that it is the overlap or integration between subgroup and superordinate identities that defines which perspective matters and how these are related to intergroup outcomes. Nevertheless, one

empirical and one theoretical argument let us to abide by this idea. First, we found a highly similar pattern of results across studies, and could further specify in Study 2 that, rather than simultaneous identification with both subgroups or subgroup and superordinate identification by themselves, separate identification as a direct measure that incorporated both subgroup and superordinate identification moderated the effects most clearly. Second, we believe that our operationalizations strongly reflect what Benet-Martínez and her colleagues define in their bicultural identity integration scale (e.g., Huynh et al., 2011), namely the extent to which ethnic and national identities of bicultural individuals are compatible and overlap versus are conflictual and distant.

In fact, encouraged by the bigger picture our findings paint, we would even like to go as far as to suggest that this felt overlap or distance between two identities might be conceived of in terms of a broader dimension that – independent of group status – captures the clarity versus bleariness of ingroup-outgroup boundaries, an idea that closely matches the conceptualization of social identities along a continuum of cognitive complexity (Tetlock, 1983; in Roccas & Brewer, 2002; see also Brewer, 2010). Specifically, the more that the boundaries between what individuals define as their ingroup and outgroup is clear-cut, the more their perceptions are shaped by a 'black and white' schema: What they think is not what we think. Thereby, the outgroup's perspective is likely to be threatening, bearing negative implications. Conversely, i.e. the more ingroup-outgroup distinctions become irrelevant or even meaningless because both are highly intertwined and integrated, what would objectively defined to be an outgroup (e.g. the majority for a minority member) has subjectively become an ingroup. Here the implication would be that one's meta-perspective is not threatening, but merged or even indistinguishable from one's own.

Furthermore, again independent of status, ingroup-favoring tendencies regarding the superordinate group (such as ingroup projection) should be stronger and related to less positive intergroup relations among those who perceive clear-cut boundaries, while this relation should be absent (or reversed) among those who perceive the boundaries to be more overlapping (LaFromboise et al., 1993; Phinney & Devich-Navarro, 1997). As a related first indication, Mummendey & Kessler (2008) found that the relation between higher relative ingroup prototypicality and less positive intergroup outcomes was more pronounced when majority members had an assimilation goal relative to when they had an integration goal.

In sum, the introduction of different types of dual identities proved to be a useful moderator in determining the role of own and attributed superordinate group representations in minorities. Yet, the scope and specificity of this moderator was limited by the

operationalizations employed in the present studies, and investigating the relevance of the proposed dimension regarding the clarity of group boundaries across group status seems worthwhile to pursue in future studies.

4.6 Conclusion

This thesis made a novel contribution to intergroup research by introducing meta-perceptions of the superordinate category as a crucial component of both minority and majority group members' evaluation of their intergroup relation. We believe that we were able to paint a more complete picture of the role of superordinate categories as evaluative background not only by investigating both sides of the same intergroup context, but, more importantly, by taking into account both group members' own and their meta-perceptions simultaneously.

This dissertation was able to expand the scope of the ingroup projection model by developing an account of how minorities or disadvantaged groups use the superordinate group as evaluative background, and that they do so from their own or the majority's perspective depending on how their dual identities are interrelated. This work also extends the acculturation frameworks by disentangling the separate contributions of own and meta-perceptions, as well as their interrelation, in predicting intergroup outcomes. The present studies further contribute to existing theory and evidence by integrating the social power and identity threat approaches. In predicting intergroup outcomes, individuals' own perspective is more relevant to the more powerful majority, as expected from social power research. Yet, in line with the social identity threat approach, the perspective attributed to the outgroup is not entirely ignored, but instead interacts with one's own perspective to strengthen the relationship between superordinate category representations and intergroup evaluations. As expected from both theoretical perspectives, the perception attributed to the outgroup is most relevant to the less powerful minority, especially to those with strong ties to this group, while those with more merged identities seem to merge and/or switch between minority and majority perspectives.

To conclude, our studies add to the growing body of research that emphasizes the benefits of establishing of a more complex superordinate group representation that will allow for greater prototypicality of the subordinate group without (too much) reducing the relative prototypicality of the dominant group. The patterns of our findings encourage us to specify that such complexity is possible and may be facilitated through sensitive and sensible

information exchange aimed at positively adjusting the often negatively exaggerated and thus threatening subjective representation of the outgroup's perspective.

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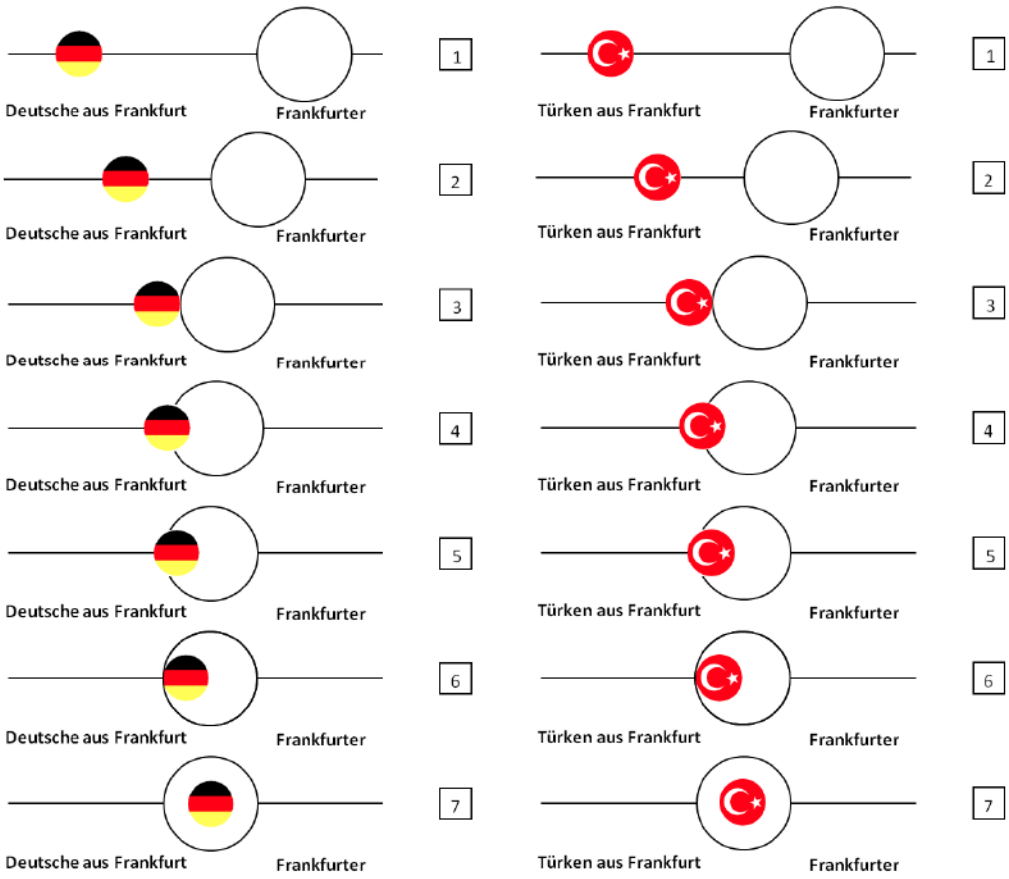
Appendix

Appendix A: Pictorial prototypicality measures for Germans and Turks from Frankfurt used in Study 2.



Appendix B: List of migration backgrounds in the minority sample of Study 3.

	Minority background
Turkish	54
Resettlers	26
Polish	14
Italian	11
Serbian-Montenegrian	7
Greek	2
other	48
Total	162

Appendix C: Additional Tables and Figures.

Table C1. *Prediction of intergroup outcomes by own- and meta-perceptions of ingroup and outgroup prototypicality (single scores), for the minority sample (N = 64) of Study 1.*

Outgroup attitudes	Step 1			Step 2		
	β	*t*	*p*	β	*t*	*p*
(Constant)		9.00	.000		10.25	.000
own-Prot. IG	.23	1.61	.112	.35	2.15	.037
own-Prot. OG	-.03	-.18	.860	-.24	-1.46	.151
meta-Prot. IG	-.05	-.33	.747	-.01	-.11	.916
meta-Prot. OG	.00	.03	.979	-.01	-.06	.952
ID_{IG}	.22	1.50	.140	.25	1.66	.103
ID_{OG}	.20	1.43	.159	.21	1.57	.123
Gender	**-.23**	**-1.69**	**.097**	-.29	-2.36	.023
own-Prot. IG x ID_{Min}				.08	.56	.579
own-Prot. OG x ID_{Min}				.18	1.42	.163
meta-Prot. IG x ID_{Min}				**.31**	**2.32**	**.025**
meta-Prot. OG x ID_{Min}				.15	.98	.331
own-Prot. IG x ID_{Maj}				.24	1.43	.161
own-Prot. OG x ID_{Maj}				-.02	-.11	.913
meta-Prot. IG x ID_{Maj}				**-.50**	**-2.95**	**.005**
meta-Prot. OG x ID_{Maj}				.12	.78	.440
Ingroup Bias	Step 1			Step 2		
	β	*t*	*p*	β	*t*	*p*
(Constant)		-.32	.750		-.13	.898
own-Prot. IG	.08	.56	.581	.26	1.41	.164
own-Prot. OG	.21	1.47	.147	-.03	-.18	.858
meta-Prot. IG	-.15	-1.05	.301	-.08	-.54	.591
meta-Prot. OG	-.04	-.31	.756	-.11	-.79	.433
ID_{IG}	.02	.17	.869	-.22	-1.34	.186
ID_{OG}	-.12	-.82	.415	.08	.56	.581
own-Prot. IG x ID_{Min}				**-.33**	**-2.15**	**.036**
own-Prot. OG x ID_{Min}				.05	.37	.714
meta-Prot. IG x ID_{Min}				-.16	-1.09	.282
meta-Prot. OG x ID_{Min}				.01	.03	.976
own-Prot. IG x ID_{Maj}				**.58**	**3.08**	**.003**
own-Prot. OG x ID_{Maj}				-.12	-.71	.482
meta-Prot. IG x ID_{Maj}				-.01	-.03	.980
meta-Prot. OG x ID_{Maj}				.00	-.02	.986

Note: IG = Ingroup, OG = Outgroup ID_{Min} = Minority identification, ID_{Maj} = Majority identification, own-Prot. = own prototypicality perception, meta-Prot. = attributed prototypicality perception; significant effects are printed in bold, *p*s ≤ .10.

Table C1 *(cont.)*.

Ingroup attitudes	Step 1 β	*t*	*p*	Step 2 β	*t*	*p*
(Constant)		28.21	.000		25.53	.000
own-Prot. IG	-.05	-.37	.716	.03	.17	.862
own-Prot. OG	.17	1.16	.252	.00	.01	.993
meta-Prot. IG	.17	1.18	.245	.19	1.28	.206
meta-Prot. OG	-.11	-.77	.442	-.13	-.86	.396
ID_{IG}	.14	.93	.358	.20	1.21	.231
ID_{OG}	-.03	-.23	.818	-.07	-.47	.639
own-Prot. IG x ID_{Min}				.05	.29	.771
own-Prot. OG x ID_{Min}				.09	.61	.545
meta-Prot. IG x ID_{Min}				**.28**	**1.83**	**.074**
meta-Prot. OG x ID_{Min}				.15	.89	.377
own-Prot. IG x ID_{Maj}				.15	.75	.460
own-Prot. OG x ID_{Maj}				.06	.37	.715
meta-Prot. IG x ID_{Maj}				**-.47**	**-2.38**	**.021**
meta-Prot. OG x ID_{Maj}				-.06	-.36	.719
Superordinate Identification	Step 1 β	*t*	*p*	Step 2 β	*t*	*p*
(Constant)		7.94	.000		7.21	.000
own-Prot. IG	**.22**	**1.73**	**.089**	.17	1.03	.306
own-Prot. OG	.18	1.39	.171	.31	1.81	.077
meta-Prot. IG	-.06	-.47	.637	-.12	-.86	.396
meta-Prot. OG	**-.26**	**-2.10**	**.040**	-.26	-1.95	.057
ID_{IG}	**.40**	**3.09**	**.003**	.47	3.02	.004
ID_{OG}	**.25**	**1.99**	**.052**	.21	1.50	.141
Gender	**-.23**	**-1.91**	**.061**	-.19	-1.53	.133
own-Prot. IG x ID_{Min}				-.09	-.64	.525
own-Prot. OG x ID_{Min}				.02	.12	.906
meta-Prot. IG x ID_{Min}				-.06	-.40	.692
meta-Prot. OG x ID_{Min}				.03	.16	.870
own-Prot. IG x ID_{Maj}				-.27	-1.55	.127
own-Prot. OG x ID_{Maj}				-.10	-.66	.511
meta-Prot. IG x ID_{Maj}				.20	1.12	.269
meta-Prot. OG x ID_{Maj}				-.10	-.63	.530

Note: IG = Ingroup, OG = Outgroup ID_{Min} = Minority identification, ID_{Maj} = Majority identification, own-Prot. = own prototypicality perception, meta-Prot. = attributed prototypicality perception; significant effects are printed in bold, *p*s ≤ .10.

Table C1 *(cont.)*.

Ingroup Status	Step 1			Step 2		
	β	*t*	*p*	β	*t*	*p*
(Constant)		7.28	.000		7.27	.000
own-Prot. IG	-.01	-.09	.928	-.13	-.64	.524
own-Prot. OG	.11	.76	.450	.13	.66	.516
meta-Prot. IG	**-.29**	**-2.02**	**.049**	-.22	-1.38	.173
meta-Prot. OG	.07	.53	.601	.10	.63	.531
ID_{IG}	.18	1.21	.231	.19	1.06	.295
ID_{OG}	.00	.02	.986	-.04	-.25	.805
own-Prot. IG x ID_{Min}				.16	.96	.343
own-Prot. OG x ID_{Min}				-.13	-.88	.381
meta-Prot. IG x ID_{Min}				.06	.37	.713
meta-Prot. OG x ID_{Min}				-.14	-.75	.457
own-Prot. IG x ID_{Maj}				.03	.14	.891
own-Prot. OG x ID_{Maj}				**.33**	**1.87**	**.068**
meta-Prot. IG x ID_{Maj}				-.16	-.82	.419
meta-Prot. OG x ID_{Maj}				-.01	-.06	.957
Perc. legitimacy	Step 1			Step 2		
	β	*t*	*p*	β	*t*	*p*
(Constant)		13.51	.000		11.58	.000
own-Prot. IG	-.10	-.65	.519	-.06	-.33	.741
own-Prot. OG	-.02	-.12	.905	-.03	-.18	.857
meta-Prot. IG	.22	1.51	.138	.14	.89	.377
meta-Prot. OG	-.21	-1.45	.153	-.19	-1.31	.195
ID_{IG}	.00	-.01	.994	-.07	-.43	.673
ID_{OG}	.04	.30	.768	.13	.81	.422
own-Prot. IG x ID_{Min}				-.15	-.89	.378
own-Prot. OG x ID_{Min}				.05	.32	.753
meta-Prot. IG x ID_{Min}				.24	1.54	.131
meta-Prot. OG x ID_{Min}				-.09	-.52	.605
own-Prot. IG x ID_{Maj}				.02	.11	.917
own-Prot. OG x ID_{Maj}				-.19	-1.12	.267
meta-Prot. IG x ID_{Maj}				.19	.93	.357
meta-Prot. OG x ID_{Maj}				.19	1.08	.285

Note: IG = Ingroup, OG = Outgroup ID_{Min} = Minority identification, ID_{Maj} = Majority identification, own-Prot. = own prototypicality perception, meta-Prot. = attributed prototypicality perception; significant effects are printed in bold, *p*s ≤ .10.

Table C1 (cont.).

Perc. stability	Step 1			Step 2		
	β	*t*	*p*	β	*t*	*p*
(Constant)		17.02	.000		14.51	.000
own-Prot. IG	.23	1.60	.116	.30	1.59	.119
own-Prot. OG	-.12	-.84	.405	-.10	-.53	.602
meta-Prot. IG	**.24**	**1.68**	**.099**	.18	1.18	.244
meta-Prot. OG	-.17	-1.26	.212	-.14	-.98	.331
ID_{IG}	.22	1.46	.151	.22	1.33	.190
ID_{OG}	**-.28**	**-2.00**	**.051**	-.30	-1.96	.056
own-Prot. IG x ID_{Min}				.17	1.10	.278
own-Prot. OG x ID_{Min}				.01	.08	.934
meta-Prot. IG x ID_{Min}				-.03	-.19	.854
meta-Prot. OG x ID_{Min}				.11	.65	.521
own-Prot. IG x ID_{Maj}				-.09	-.45	.657
own-Prot. OG x ID_{Maj}				-.27	-1.52	.136
meta-Prot. IG x ID_{Maj}				**.39**	**1.81**	**.077**
meta-Prot. OG x ID_{Maj}				-.01	-.05	.959
Perc. permeability	Step 1			Step 2		
	β	*t*	*p*	β	*t*	*p*
(Constant)		3.34	.001		3.20	.002
own-Prot. IG	.12	.83	.413	.24	1.21	.232
own-Prot. OG	.20	1.35	.183	.11	.53	.597
meta-Prot. IG	-.03	-.21	.838	-.06	-.38	.707
meta-Prot. OG	-.04	-.27	.789	-.05	-.31	.758
ID_{IG}	.14	.95	.345	.14	.76	.453
ID_{OG}	-.05	-.32	.751	-.04	-.27	.792
own-Prot. IG x ID_{Min}				.10	.59	.561
own-Prot. OG x ID_{Min}				.14	.90	.373
meta-Prot. IG x ID_{Min}				-.09	-.56	.582
meta-Prot. OG x ID_{Min}				-.05	-.29	.772
own-Prot. IG x ID_{Maj}				-.04	-.18	.857
own-Prot. OG x ID_{Maj}				-.25	-1.39	.172
meta-Prot. IG x ID_{Maj}				-.13	-.64	.524
meta-Prot. OG x ID_{Maj}				.10	.55	.587

Note: IG = Ingroup, OG = Outgroup ID_{Min} = Minority identification, ID_{Maj} = Majority identification, own-Prot. = own prototypicality perception, meta-Prot. = attributed prototypicality perception; significant effects are printed in bold, *p*s ≤ .10.

Table C2. *Multiple hierarchical regressions of intergroup outcomes on own- and meta-perceptions of relative ingroup prototypicality, dual identification, and the interactions of prototypicality perceptions with identification for the majority sample (N = 229) of Study 2.*

	Ingroup attitudes			Outgroup attitudes			Ingroup bias			Cultural similarities		
	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*
(Constant)		104.48	.000		48.16	.000		11.95	.000		39.53	.000
own-RP	.21	2.91	.004	-.24	-3.20	.002	.36	4.92	.000	-.19	-2.40	.017
meta_RP	-.06	-.86	.390	.30	4.22	.000	-.24	-3.48	.001	.18	2.36	.019
dual ID	.27	4.20	.000	-.05	-.72	.470	.14	2.14	.034	-.01	-.10	.921
(Constant)		99.52	.000		47.14	.000		10.70	.000		38.52	.000
own-RP	.22	2.99	.003	-.26	-3.39	.001	.38	5.19	.000	-.20	-2.59	.010
meta_RP	-.05	-.74	.459	.29	4.09	.000	-.23	-3.34	.001	.17	2.28	.024
dual ID	.27	4.07	.000	-.04	-.58	.562	.13	1.96	.051	.01	.07	.945
own-RP x ID	.12	1.71	.089	-.17	-2.34	.020	.20	2.94	.004	-.14	-1.81	.071
meta -RP x ID	-.03	-.46	.643	.03	.42	.677	-.04	-.53	.599	.00	.03	.975

	Outgroup friends			Political orientation			Ingroup emotions			Outgroup emotions		
	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*
(Constant)		27.13	.000		44.30	.000		54.31	.000		48.01	.000
own-RP	-.20	-2.54	.012	.19	2.61	.010	-.24	-3.19	.002	.27	3.71	.000
meta_RP	.00	.06	.952	-.31	-4.43	.000	.04	.50	.616	-.35	-5.00	.000
dual ID	.00	.03	.977	.18	2.75	.006	-.21	-3.16	.002	.05	.77	.441
(Constant)		25.99	.000		43.36	.000		52.28	.000		45.47	.000
own-RP	-.20	-2.52	.012	.24	3.35	.001	-.24	-3.13	.002	.29	3.85	.000
meta_RP	.00	.01	.991	-.34	-4.87	.000	.03	.34	.731	-.35	-4.91	.000
dual ID	.00	.04	.972	.13	2.03	.044	-.21	-3.18	.002	.04	.61	.541
own-RP x ID	-.05	-.60	.551	.03	.37	.711	-.10	-1.41	.160	.11	1.56	.121
meta -RP x ID	.02	.24	.809	.24	3.42	.001	.07	.97	.333	.00	-.01	.991

Note. own = own perception of relative ingroup prototypicality, meta = perception of relative ingroup prototypicality attributed to the outgroup, ID = identification.

Table C2 *(cont.)*.

	integration chances			perc. legitimacy			perc. permeability			perc. stability		
	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*
(Constant)		58.52	.000		-37.05	.000		40.48	.000		56.76	.000
own-RP	-.18	-2.37	.018	.20	2.65	.009	-.22	-2.90	.004	.09	1.10	.271
meta_RP	.17	2.30	.022	-.16	-2.22	.028	.08	1.13	.261	-.15	-2.03	.043
dual ID	.00	.01	.995	.06	.92	.358	.10	1.39	.166	.05	.70	.485
(Constant)		56.24	.000		-35.85	.000		38.68	.000		54.36	.000
own-RP	-.20	-2.52	.013	.23	2.91	.004	-.22	-2.82	.005	.09	1.07	.285
meta_RP	.17	2.27	.024	-.17	-2.26	.025	.08	1.04	.299	-.16	-2.10	.037
dual ID	.01	.17	.869	.04	.63	.529	.09	1.31	.192	.05	.66	.510
own-RP x ID	-.08	-1.05	.295	.07	.96	.338	-.04	-.57	.572	-.07	-.93	.351
meta -RP x ID	-.02	-.27	.788	.07	.87	.385	.04	.51	.614	.04	.54	.592

	Ingroup status		
	β	*t*	*p*
(Constant)		61.92	.000
own-RP	.17	2.27	.024
meta_RP	.13	1.77	.078
dual ID	.00	.06	.953
(Constant)		60.21	.000
own-RP	.18	2.30	.022
meta_RP	.11	1.52	.131
dual ID	-.01	-.08	.939
own-RP x ID	-.16	-2.23	.026
meta -RP x ID	.12	1.65	.101

Note. own = own perception of relative ingroup prototypicality, meta = perception of relative ingroup prototypicality attributed to the outgroup, ID = identification.

Table C3. *Prediction of intergroup outcomes by own- and meta-perceptions of ingroup and outgroup prototypicality (single scores), separately for merged versus separate identifiers within the minority sample (N = 99) of Study 2.*

	Ingroup attitudes			Outgroup attitudes			Ingroup bias			Cultural similarities		
Merged ID	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*
(Constant)		3.54	.001		4.51	.000		.37	.712		4.30	.000
own-Prot. IG	**.56**	**3.96**	**.000**	.24	1.68	.100	**.30**	**1.79**	**.080**	-.17	-.99	.326
own-Prot. OG	.10	.74	.464	**.44**	**3.21**	**.003**	-.13	-.82	.416	-.07	-.43	.673
meta-Prot. IG	**-.28**	**-1.94**	**.060**	**-.26**	**-1.80**	**.079**	-.14	-.84	.408	.11	.66	.512
meta-Prot. OG	-.13	-.93	.356	-.09	-.64	.524	-.06	-.41	.688	.01	.06	.949
Separate ID												
(Constant)		6.72	.000		8.09	.000		1.84	.072		3.83	.000
own-Prot. IG	**.32**	**1.98**	**.054**	.08	.52	.603	.22	1.33	.190	.11	.64	.526
own-Prot. OG	.16	1.12	.269	-.08	-.60	.550	.09	.64	.525	.06	.36	.720
meta-Prot. IG	-.17	-1.14	.260	**.31**	**2.17**	**.035**	**-.38**	**-2.60**	**.012**	.03	.20	.842
meta-Prot. OG	-.13	-.84	.403	**.27**	**1.91**	**.062**	-.15	-.99	.329	.00	.01	.989

	Outgroup friends			Superordinate ID			Religiousness			Political Orientation		
Merged ID	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*
(Constant)		5.73	.000		2.90	.006		4.99	.000		5.42	.000
own-Prot. IG	.07	.44	.665	**.43**	**2.87**	**.006**	.11	.72	.473	.11	.66	.516
own-Prot. OG	-.25	-1.55	.129	.21	1.48	.146	**-.43**	**-2.83**	**.007**	**-.35**	**-2.30**	**.027**
meta-Prot. IG	.18	1.08	.287	-.34	-2.26	.029	.10	.62	.538	.02	.14	.892
meta-Prot. OG	.04	.25	.802	-.09	-.65	.518	-.05	-.31	.761	-.13	-.87	.389
Separate ID												
(Constant)		5.72	.000		1.51	.136		3.89	.000		4.06	.000
own-Prot. IG	-.28	-1.74	.088	.07	.45	.658	.07	.43	.666	.15	.86	.393
own-Prot. OG	-.25	-1.80	.079	.13	.96	.340	.25	1.68	.100	.13	.88	.384
meta-Prot. IG	**.33**	**2.29**	**.027**	**.31**	**2.29**	**.026**	-.19	-1.26	.213	-.17	-1.11	.272
meta-Prot. OG	.19	1.29	.203	**.37**	**2.79**	**.008**	.02	.11	.910	-.23	-1.49	.144

Note: own-Prot. = own prototypicality perception, meta-Prot. = attributed prototypicality perception; significant effects are printed in bold, *p*s ≤ .10. For all regressions, the differences between separate and merged identifiers were also shown in respective significant interactions between the prototypicality perception and separate identification, with the exception of outgroup friends, see Table C3 below.

Table C3 *(cont.)*.

	Outgroup emotions			Ingroup emotions			Perc. legitimacy			Stability		
Merged ID	β	*t*	*p*	β	*t*	*p*	β	t	p	β	t	p
(Constant)		6.73	.000		3.72	.001		2.16	.000		4.07	.000
own-Prot. IG	-.05	-.36	.719	**-.41**	**-2.59**	**.013**	-.21	-1.30	.202	.05	.30	.763
own-Prot. OG	**-.48**	**-3.33**	**.002**	.08	.51	.611	.08	.50	.623	-.16	-.97	.337
meta-Prot. IG	.07	.44	.664	.16	1.01	.317	.08	.50	.618	.22	1.30	.203
meta-Prot. OG	.06	.44	.662	.19	1.26	.215	.26	1.67	.103	.17	1.06	.297
Separate ID												
(Constant)		8.70	.000		4.53	.000		2.90	.000		4.99	.000
own-Prot. IG	-.10	-.59	.558	-.17	-1.03	.310	.24	1.51	.138	-.02	-.08	.933
own-Prot. OG	-.02	-.14	.887	-.14	-.94	.350	**-.26**	**-1.85**	**.070**	.07	.45	.657
meta-Prot. IG	-.14	-.91	.367	.20	1.31	.198	-.13	-.91	.369	.03	.18	.859
meta-Prot. OG	-.23	-1.56	.125	.12	.79	.432	-.35	-2.42	**.019**	.07	.42	.675

	Permeability			Integration beliefs		
Merged ID	β	*t*	*p*	β	*t*	*p*
(Constant)		1.08	.288		5.74	.000
own-Prot. IG	.12	.71	.480	.06	.33	.740
own-Prot. OG	.16	.98	.334	.06	.36	.720
meta-Prot. IG	-.06	-.35	.727	-.18	-1.06	.296
meta-Prot. OG	.08	.47	.639	-.07	-.45	.656
Separate ID						
(Constant)		3.84	.000		9.19	.000
own-Prot. IG	.23	1.37	.177	.19	1.08	.286
own-Prot. OG	-.20	-1.35	.184	-.16	-1.03	.307
meta-Prot. IG	-.01	-.03	.973	-.05	-.32	.754
meta-Prot. OG	-.15	-.99	.329	-.04	-.27	.785

Note: own-Prot. = own prototypicality perception, meta-Prot. = attributed prototypicality perception; significant effects are printed in bold, *p*s ≤ .10. For all regressions, the differences between separate and merged identifiers were also shown in respective significant interactions between the prototypicality perception and separate identification, with the exception of outgroup friends, see Table D3 below.

Table C4. *Prediction of intergroup outcomes by own- and meta-perceptions of relative prototypicality (forced-choice items), separately for merged versus separate identifiers within the minority sample (N=99) of Study 2.*

	Ingroup attitudes			Outgroup attitudes			Ingroup bias			Cultural similarities		
	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*
Merged ID												
Own-RP	-.09	-.54	.589	**.34**	**2.45**	**.018**	-.01	-.05	.961	.03	.20	.844
Meta-RP	.26	1.62	.114	**.31**	**2.27**	**.028**	-.17	-1.07	.290	-.19	-1.20	.236
Separate ID												
Own-RP	-.04	-.23	.819	**-.38**	**-2.42**	**.019**	.04	.21	.833	**-.36**	**-2.30**	**.026**
Meta-RP	.25	1.55	.127	**.36**	**2.33**	**.024**	.11	.69	.495	**.34**	**2.21**	**.032**

	Outgroup friends			Superordinate ID			Religiousness			Political orientation		
	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*
Merged ID												
Own-RP	-.10	-.60	.549	.13	.82	.419	**-.33**	**-2.27**	**.028**	-.21	-1.44	.158
Meta-RP	.10	.61	.544	.25	1.63	.111	-.19	-1.27	**.**211	**-.30**	**-2.04**	**.047**
Separate ID												
Own-RP	-.16	-1.00	.324	-.26	-1.59	.118	.14	.83	.413	.12	.75	.456
Meta-RP	-.06	-.38	.703	.26	1.63	.110	-.08	-.47	.638	-.06	-.39	.701

Note. ID = identification, own-RP = own perception of relative ingroup prototypicality, meta-RP = attributed perception of relative ingroup prototypicality, significant effects are printed in bold, ps ≤ .10.

Table C4 *(cont.)*.

	Outgroup emotions			Ingroup emotions			Illegitimacy			Stability		
	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*
Merged ID												
Own-RP	**-.27**	**-1.80**	**.079**	.00	.06	.950	.05	.32	.750	-.211	-1.35	.18
Meta-RP	-.23	-1.57	.124	.01	.49	.624	-.11	-.67	.506	-.14	-.90	.371
Separate ID												
Own-RP	.22	1.33	.189	**-.03**	**-1.80**	**.078**	**.35**	**2.22**	**.031**	.11	.67	.509
Meta-RP	-.12	-.71	.480	-.01	-.90	.371	-.10	-.61	.544	.14	.83	.409

	Permeability			Integration chances		
	β	*t*	*p*	β	*t*	*p*
Merged ID						
Own-RP	.10	.63	.531	-.03	-.15	.879
Meta-RP	-.02	-.13	.898	.133	.82	.418
Separate ID						
Own-RP	-.20	-1.27	.210	.19	1.18	.245
Meta-RP	**.30**	**1.89**	**.064**	.12	.72	.475

Note. ID = identification, own-RP = own perception of relative ingroup prototypicality, meta-RP = attributed perception of relative ingroup prototypicality, significant effects are printed in bold, ps ≤ .10.

Table C5. *Prediction of change in intergroup outcomes by majority members' own and attributed preferences for cultural adoption over cultural maintenance (quotient scores) in Study 3.*

	Ingroup bias			social distance			cultural distance		
	β	t	p	β	t	p	β	t	p
rel. adoption (own)	**.14**	**3.30**	**.001**	**.11**	**3.36**	**.001**	**.16**	**3.88**	**.000**
rel. adoption (meta)	.05	1.50	.135	.02	.86	.390	-.04	-1.09	.276
stability bias	.58	14.12	.000	.73	22.02	.000	.49	12.00	.000
	Behavioral intentions			Social competition			Contact quality		
	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*
rel. adoption (own)	**-.17**	**-4.42**	**.000**	**.17**	**4.06**	**.000**	**-.15**	**-2.78**	**.006**
rel. adoption (meta)	-.04	-1.30	.195	-.01	-.29	.776	-.02	-.42	.673
Stability intentions	.58	14.67	.000	.48	11.29	.000	.40	7.38	.000
	Positive emotions			Negative emotions			Intergroup anxiety		
	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*
rel. adoption (own)	**-.24**	**-6.33**	**.000**	**.25**	**6.56**	**.000**	**.18**	**4.30**	**.000**
rel. adoption (meta)	-.04	-1.08	.279	-.02	-.53	.594	**-.09**	**-2.32**	**.021**
Stability pos.emot.	.53	13.92	.000	.50	13.02	.000	.43	10.45	.000

Note. rel. = relative, own = own preference, meta = preference attributed to the outgroup, significant effects of change are printed in bold.

Table C6*: Prediction of change in intergroup outcomes by majority members' own and attributed preferences for cultural adoption and cultural maintenance (single scores) in Study 3.*

	Ingroup bias			social distance			cultural distance		
	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*
own-adopt	**.09**	**2.09**	**.037**	**.06**	**1.74**	**.083**	-.02	-.41	.682
own-maintain	**-.08**	**-1.77**	**.078**	**-.09**	**-2.35**	**.019**	**-.15**	**-3.17**	**.002**
meta-adopt	.00	-.08	.939	.01	.32	.752	-.01	-.18	.854
meta-maintain	-.02	-.44	.658	.02	.61	.545	.06	1.39	.164
stability	.59	14.47	.000	.71	20.77	.000	.50	12.20	.000
	Behavioral intentions			Social competition			Contact quality		
	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*
own-adopt	**-.08**	**-2.00**	**.046**	**.11**	**2.48**	**.014**	-.06	-1.00	.317
own-maintain	**.14**	**3.12**	**.002**	**-.11**	**-2.21**	**.027**	**.11**	**1.75**	**.082**
meta-adopt	-.05	-1.09	.278	-.03	-.72	.475	-.03	-.52	.606
meta-maintain	-.03	-.83	.407	.00	.06	.956	.01	.09	.929
stability	.57	14.35	.000	.47	10.83	.000	.40	7.10	.000
	Positive emotions			Negative emotions			Intergroup anxiety		
	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*
own-adopt	**-.10**	**-2.32**	**.021**	**.12**	**2.71**	**.007**	.07	1.39	.166
own-maintain	**.15**	**3.29**	**.001**	**-.19**	**-4.27**	**.000**	**-.10**	**-2.04**	**.042**
meta-adopt	.06	1.50	.134	-.05	-1.05	.296	-.05	-1.00	.317
meta-maintain	.05	1.28	.200	.02	.35	.724	.06	1.15	.250
stability	.53	13.43	.000	.48	12.30	.000	.43	10.27	.000

Note. own = own acculturation preference, meta = acculturation preference attributed to the outgroup, significant effects are printed in bold, *p*s ≤ .10.

Table C7. *Prediction of change in intergroup outcomes by separate and merged minority members' own and attributed* ***preferences*** *for cultural adoption and cultural maintenance (single scores) in Study 3.*

	Ingroup bias			Cultural distance			Behavioral intentions		
	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*
Merged ID									
own-adopt	-.10	-.74	.463	.00	.01	.995	-.08	-.64	.525
own-maintain	-.02	-.12	.908	.12	.91	.365	-.08	-.66	.513
meta-adopt	-.06	-.44	.661	.12	.79	.431	.09	.76	.452
meta-maintain	-.18	-1.33	.191	.03	.18	.860	-.14	-1.19	.241
stability	.41	3.10	.003	.27	1.78	.080	.55	4.45	.000
Separate ID									
own-adopt	**-.21**	**-1.85**	**.067**	-.01	-.13	.895	.38	4.00	.000
own-maintain	-.14	-1.12	.267	-.10	-.89	.375	.14	1.47	.145
meta-adopt	-.11	-.98	.329	.01	.12	.905	.01	.12	.906
meta-maintain	**-.25**	**-2.33**	**.022**	**-.17**	**-1.72**	**.090**	**.20**	**2.29**	**.024**
stability	.20	1.60	.113	.49	4.46	.000	.40	4.40	.000

	Contact quality			Positive emotions			Negative emotions		
	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*
Merged ID									
own-adopt	-.12	-.88	.383	.09	.72	.475	-.18	-1.44	.154
own-maintain	-.04	-.29	.770	**-.31**	**-2.59**	**.012**	-.01	-.05	.959
meta-adopt	**.27**	**1.97**	**.054**	.01	.06	.956	-.18	-1.37	.177
meta-maintain	.01	.06	.955	.11	.86	.391	-.03	-.26	.797
stability	.45	3.26	.002	.33	2.74	.008	.22	1.84	.070
Separate ID									
own-adopt	.06	.52	.607	**.25**	**2.39**	**.019**	.16	1.51	.136
own-maintain	-.11	-1.03	.307	-.03	-.25	.806	.03	.30	.762
meta-adopt	-.10	-1.00	.323	.01	.14	.887	-.04	-.46	.647
meta-maintain	-.07	-.74	.460	.01	.08	.937	.01	.14	.887
stability	.51	4.98	.000	.36	3.46	.001	.53	5.24	.000

Note. own = own acculturation preference, meta = acculturation preference attributed to the outgroup, significant effects of change are printed in bold, *p*s ≤ .10.

Table C7 *(cont.)*

	Intergroup anxiety		
	β	*t*	*p*
Merged ID			
own-adopt	.13	1.25	.218
own-maintain	**.17**	**1.70**	**.095**
meta-adopt	**-.30**	**-2.69**	**.009**
meta-maintain	-.06	-.50	.621
stability	.55	5.25	.000
Separate ID			
own-adopt	**-.17**	**-1.79**	**.077**
own-maintain	.03	.26	.797
meta-adopt	.07	.78	.436
meta-maintain	**.25**	**2.65**	**.010**
stability	.43	4.77	.000

Note. own = own acculturation preference, meta = acculturation preference attributed to the outgroup, significant effects of change are printed in bold, *p*s ≤ .10.

Table C8. *Prediction of change in intergroup outcomes by separate and merged minority members' own and attributed* ***demands*** *for cultural adoption and cultural maintenance (single scores) in Study 3.*

	Ingroup bias			Cultural distance			Behavioral intentions		
	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*
Merged ID									
own-adopt	**-.31**	**-2.42**	**.019**	**-.25**	**-1.94**	**.058**	.07	.58	.566
own-maintain	-.09	-.69	.492	-.03	-.20	.845	-.06	-.50	.620
meta-adopt	-.07	-.61	.546	.03	.21	.833	.03	.23	.817
meta-maintain	-.03	-.23	.821	-.13	-.95	.346	**-.20**	**-1.70**	**.095**
stability	.33	2.50	.015	.25	1.87	.067	.51	4.40	.000
Separate ID									
own-adopt	-.15	-1.41	.161	.10	.97	.337	.15	1.61	.112
own-maintain	-.08	-.74	.459	-.04	-.36	.722	-.02	-.23	.817
meta-adopt	.05	.42	.673	.01	.14	.890	.02	.26	.799
meta-maintain	-.08	-.73	.468	.00	-.04	.972	**.17**	**1.84**	**.070**
stability	.16	1.43	.156	.51	4.91	.000	.48	5.21	.000

	Contact quality			Positive emotions			Negative emotions		
	β	*t*	*p*	β	*t*	*p*	β	*t*	*p*
Merged ID									
own-adopt	.02	.14	.888	**.25**	**1.97**	**.054**	**-.25**	**-1.91**	**.061**
own-maintain	-.06	-.50	.622	-.12	-.94	.350	-.06	-.44	.662
meta-adopt	.17	1.25	.218	.02	.15	.882	-.05	-.40	.688
meta-maintain	-.07	-.53	.598	.02	.17	.865	.00	-.01	.996
stability	.49	3.68	.001	.31	2.51	.015	.25	1.99	.052
Separate ID									
own-adopt	-.08	-.85	.400	.11	1.25	.216	**.17**	**1.85**	**.068**
own-maintain	.04	.43	.669	.10	1.07	.290	.08	.79	.434
meta-adopt	-.11	-1.12	.267	.06	.66	.513	.01	.15	.884
meta-maintain	.00	.02	.984	.10	1.09	.281	.05	.52	.604
stability	.60	6.10	.000	.52	5.14	.000	.49	5.18	.000

Note. own = own acculturation demand, meta = acculturation demand attributed to the outgroup, significant effects of change are printed in bold, *p*s ≤ .10.

Table C8 *(cont.)*

	Intergroup anxiety		
	β	*t*	*p*
Merged ID			
own-adopt	.02	.17	.868
own-maintain	-.06	-.52	.605
meta-adopt	-.03	-.28	.783
meta-maintain	**.28**	**2.40**	**.020**
stability	.60	5.18	.000
Separate ID			
own-adopt	.08	.82	.414
own-maintain	.08	.84	.403
meta-adopt	.08	.83	.410
meta-maintain	**.19**	**1.92**	**.058**
stability	.39	4.23	.000

Note. own = own acculturation demand, meta = acculturation demand attributed to the outgroup, significant effects of change are printed in bold, *p*s ≤ .10.

Summary

Why do ethnic minorities and majorities so often struggle to get along? One reason may be that even though they live in the same society, their perceptions or ideas about the societal norms and values may differ in a fundamental way. The present dissertation deals with the importance of such perceptions for the prediction of intergroup relations among minority and majority group members. From a social psychological perspective, higher-level or superordinate groups (e.g., a society or a nation) serve as background against which members of subgroups (e.g., different ethnic or cultural groups within this superordinate group) evaluate their intergroup relationship (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). Following this perspective, the ingroup projection model (IPM; Mummendey & Wenzel, 1999) informs us that the way group members represent the relative positions of ingroup and outgroup within the superordinate group is predictive of intergroup outcomes. The more that the ingroup is seen as more relatively prototypical for the norms and standards of the superordinate group, the less positive the intergroup relation will be evaluated (Wenzel, Mummendey, & Waldzus, 2007; Mummendey & Wenzel, 1999). A similar claim can be derived from intercultural acculturation frameworks (e.g., Berry, 1997; Bourhis, Moise, Perreault, & Senecal, 1997). Evidence on superordinate group representations in terms of acculturation orientations indicates that an acculturation preference that favors the ingroup's culture and that, in turn, requires the outgroup to adapt more to the ingroup, is related to less optimistic intergroup outcomes (e.g., Brown & Zagefka, 2011; Piontkowski, Florack, Hoelker, & Obdrzálek, 2000; Zárate & Shaw, 2010).

The main contribution of this dissertation to the study of superordinate groups is to introduce a hitherto rather neglected yet crucial aspect, namely *ingroup members' meta-perceptions or their beliefs of how the outgroup represents the superordinate group*. By combining the theoretical perspectives of social power (Fiske, 1993; Fiske & Deprét, 1996) and threatened social identities (Shelton, Richeson, & Vorauer, 2006; Tajfel & Turner, 1986; Zárate & Shaw, 2010) we argue why meta-perceptions can be conceptualized as social identity threats and are therefore important to (also) take into account when predicting intergroup relations.

In addition, in focusing on ethnic minority-majority relations, we along with others (e.g., Benet-Martínez & Haritatos, 2005; Hutnik, 1991; LaFromboise, Coleman, & Gerton, 1993; Phinney & Devich-Navarro, 1997) deem it crucial to differentiate between different ways in

which minority members identify with their subgroup and the superordinate group. Thereby, we distinguish minority members who feel strongly or even exclusively attached to the minority (e.g., a 'Chinese who lives in America') from those who have a strong sense of integrally belonging to both the minority and the majority or superordinate group (e.g., a 'Chinese American').

Overall, we attempted to replicate and extend evidence for the IPM's tenets previously found in majority groups, and examine the applicability of the IPM to minority groups. Thereby, the aim of the present research was threefold. First, we aimed to demonstrate that minority and majority members diverge in their superordinate group perceptions, because both groups claim a relatively better position of their ingroup within the superordinate group. We also predicted that majority and minority members' meta-perception would be more negative than their own perception, as they believe that the outgroup sees the ingroup as less representative for the superordinate group. Second, we tested the hypothesis that meta-perceptions impact on majority members in a negative way to the extent that they threaten their ingroup's superior status, and on minority members to the extent that they threaten their ingroup's recognition or even existence within the superordinate group. Guided by insights from social power research that the powerless' greater dependency on the powerful makes them highly attentive to the perspective of the powerful, we hypothesized that meta-perceptions are most relevant to highly identified minority members. Conversely, minority members who feel a comfortable sense of belonging to both sides, should not be threatened by the majority perspective and thus primarily focus on and be guided by their own representation of the superordinate group. With respect to majority members, in line with the idea that the powerful are less dependent and therefore take a more egocentric stance, their own perceptions should be the main predictor of intergroup outcomes, but their meta-perceptions should be an additional relevant predictor.

Our hypotheses were tested in three different studies, all in the intergroup context between majority Germans and minority Turks in Germany and in German cities. Different from most previous research, the present studies always investigated majority and minority members simultaneously in order to fully understand and explain their different socio-psychological realities (e.g., see Brown & Zagefka, 2011; Demoulin, Leyens, & Dovidio, 2009). While the Studies 1 and 2 used a cross-sectional correlational design and investigated the effects of own- and meta-perceptions of the superordinate group in terms of how prototypical minority and majority subgroups were for the superordinate group, Study 3 took a longitudinal approach to test the influence of superordinate group representations in terms

of acculturation orientations, i.e. how much the minority should adopt the majority culture versus maintain their heritage culture.

All studies converged on the finding that majority and minority disagreed in their representations of the superordinate group. As expected, the majority perceived and wanted the minority to be less (and themselves to be more) represented within the superordinate group. In contrast, the minority perceived and wanted their ingroup to have a relatively stronger position, both in terms of relative prototypicality and their greater preference for cultural maintenance as opposed to adoption of the mainstream culture. Further in line with our hypotheses, majority and minority members both believed that their outgroup had a different perspective from their own, namely one that put the ingroup in a weaker (and the outgroup in a stronger) position. Regarding the prediction of intergroup outcomes by superordinate group representations, all studies lended direct (Study 1 and 2) and indirect (Study 3) support to the hypothesis that group members' meta-perception of a less favorable standing of the ingroup within the superordinate group generally had more negative consequences for the intergroup relation. At the same time, in line with the social power account, meta-perceptions proved to be the primary predictor for strongly identified minority members, while own perceptions were the driving force in the prediction of intergroup outcomes among majority members. With respect to minority members who were attached to both sides, in line with the assumption that they are comfortable with and therefore not threatened by the majority's perspective, their own- rather than their meta-perceptions predicted intergroup outcomes.

In sum, this dissertation could demonstrate the relevance of meta-perceptions on the superordinate group level by specifying their function as a social identity threat that complements our understanding of the role of superordinate groups in intergroup relations, especially regarding outgroup-dependent minority groups. This work also contributes to the theoretical and empirical advances regarding the differentiation between different types of identities within minority samples, and finally offers implications for how more complex superordinate group representations can help or hinder to improve the relationship between subgroups shaped by unequal status and power positions.

Zusammenfassung

Warum fällt es ethnischen Minderheiten und Mehrheiten oft so schwer, miteinander auszukommen? Ein Grund könnte sein, dass sie sich, obwohl sie in derselben Gesellschaft leben, manchmal fundamental in ihren Vorstellungen oder Ideen bezüglich der gesellschaftlichen Normen und Werte unterscheiden. Die vorliegende Dissertation beschäftigt sich mit der Bedeutsamkeit solcher Vorstellungen für die Vorhersage von Intergruppenbeziehungen zwischen Minderheiten und Mehrheiten. Aus einer sozialpsychologischen Perspektive dienen übergeordnete Gruppen (z.B. eine Nation oder eine Gesellschaft) als Referenzrahmen, auf dessen Hintergrund Subgruppen (z.B. ethnische oder kulturelle Gruppen innerhalb einer solchen übergeordneten Gruppe) ihre Intergruppenbeziehung bewerten (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). Dieser Perspektive folgend argumentiert das Eigengruppen-Projektionsmodell (EPM; Mummendey & Wenzel, 1999), dass die Art und Weise, wie Mitglieder von Subgruppen die relativen Positionen von Eigen- und Fremdgruppe innerhalb der übergeordneten Gruppe repräsentieren, prädiktiv für die Qualität der Intergruppenbeziehung ist. Je mehr die Eigengruppe als relativ prototypischer für die Normen und Standards der übergeordneten Gruppe wahrgenommen wird, desto weniger positiv wird die Intergruppenbeziehung bewertet (Wenzel, Mummendey, & Waldzus, 2007; Mummendey & Wenzel, 1999). Eine ähnliche Annahme kann aus interkulturellen Akkulturationsmodellen (z.B. Berry, 1997; Bourhis, Moise, Perrault, & Senecal, 1997) abgeleitet werden. So zeigen Befunde zu übergeordneten Gruppen in Form von Akkulturationsorientierungen, dass Akkulturationsziele, die die Kultur der Eigengruppe bevorzugen und im Gegenzug die Fremdgruppe zur stärkeren Anpassung an die Eigengruppe fordern, mit weniger optimistischen Auswirkungen auf die Intergruppenbeziehung einhergehen (z.B. Brown & Zagefka, 2011; Piontkowski, Florack, Hoelker, & Obdrzálek, 2000; Zárate & Shaw, 2010).

Der wesentliche Beitrag dieser Dissertation zur Erkenntnis der Rolle von übergeordneten Gruppen liegt in der Einführung eines bisher eher vernachlässigten aber entscheidenden Aspektes, nämlich *der Meta-Wahrnehmung oder Vorstellung von Eingengruppen-Mitgliedern darüber, wie die Fremdbruppe die übergeordnete Gruppe repräsentiert*. Indem wir theoretische Überlegungen zu sozialer Macht (Fiske, 1993; Fisek & Deprét, 1996) mit solchen zur Bedrohung der sozialen Identität (Shelton, Richeson, & Vorauer, 2006; Tajfel & Turner, 1986; Zárate & Shaw, 2010) zusammen bringen, argumentieren wir, warum Meta-

Wahrnehmung als Bedrohung der sozialen Identität konzeptualisiert werden können und daher (auch) wichtig für die Vorhersage von Intergruppenbeziehungen sind.

Aufgrund des Fokus dieser Arbeit auf Beziehungen zwischen ethnischen Minderheiten und Mehrheiten erachten wir es neben Anderen (z.B. Benet-Martínez & Haritatos, 2005; Hutnik, 1991; LaFromboise, Coleman, & Gerton, 1993; Phinney & Devich-Navarro, 1997) als wesentlich, innerhalb der Minderheit zwischen verschiedenen Identifikationstypen zu differenzieren. In Bezug auf ihre Identifikation mit ihrer Subgruppe und der übergeordneten Gruppe unterscheiden wir Minderheitsmitglieder, die sich sehr stark, wenn nicht ausschließlich nur, mit der Minderheit verbunden fühlen (z.B. ein 'Chinese, der in Amerika lebt') von solchen, die ein starkes Zugehörigkeitsgefühl sowohl zur Minderheit als auch zur Mehrheit bzw. übergeordneten Gruppe entwickelt haben (z.B. ein 'Chinese American').

Insgesamt wurde das Ziel verfolgt, bisherige, primär Mehrheiten-orientierte Evidenz zu den Annahmen des EPM zu replizieren und zu untersuchen, ob diese Annahmen auch auf Minderheiten anwendbar sind. Hierbei wurden drei Teilziele verfolgt. Als Erstes sollte gezeigt werden, dass Minderheit und Mehrheit in ihre Wahrnehmung der übergeordeten Gruppe divergieren, weil beide Gruppen für die jeweils eigene Gruppe eine relativ stärkere Position innerhalb der übergeordneten Gruppe beanspruchen. Weiterhin wurde vorhergesagt, dass die Meta-Wahrnehmungen von Minderheits- wie Mehrheitsmitgliedern negativer als die eigene Wahrnehmung ist, da sie glauben, dass die Fremdgruppe die Eigengruppe als weniger repräsentativ für die übergeordnete Gruppe sieht. Zweitens wurde angenommen, dass Meta-Wahrnehmungen Mitglieder von Mehrheiten beeinflussen, wenn sie eine Bedrohung ihrer überlegenen Statusposition darstellen, und dass sie Mitglieder von Minderheiten beeinflussen, wenn sie eine Bedrohung der Anerkennung oder Existenz der Eigengruppe innerhalb der übergeordneten Gruppe darstellen. Ausgehend von der Erkenntnis zu sozialer Macht, dass Machtlose aufgrund ihrer Abhängigkeit von den Mächtigen sehr aufmerksam gegenüber der Perspektive der Mächtigen sind, wurde angenommen, dass Meta-Wahrnehmungen insbesondere für hoch identifizierte Mitglieder der Minderheit relevant sind. Im Gegensatz dazu sollten sich Minderheitsmitglieder, die sich in beiden Identitäten wohl fühlen, von der Mehrheitsperspektive nicht bedroht sehen und daher eher von ihrer eigenen Vorstellung der übergeordneten Gruppe beeinflusst sein. Für Mitglieder der Mehrheit wurde entsprechend der Idee, dass Mächtige weniger abhängig sind und daher eine egozentrische Haltung einnehmen, angenommen, dass ihre eigene Wahrnehmung der Hauptprädiktor für Intergruppenauswirkungen ist.

Unsere Hypothesen wurden in drei verschiedenen Studien überprüft, jeweils im Intergruppenkontext zwischen Mehrheits-Deutschen und Minderheits-Türken in Deutschland bzw. deutschen Städten. Anders als in der bisherigen Forschung üblich wurden Mehrheit und Minderheit in den vorliegenden Studien immer gemeinsam untersucht, um die unterschiedlichen sozio-psychologischen Realitäten dieser beiden Gruppen besser zu verstehen und zu erklären (siehe z.B. Brown & Zagefka, 2011; Demoulin, Leyens, & Dovidio, 2009). In Studien 1 und 2 wurde ein querschnittliches korrelatives Design verwendet und die Effekte von Eigen- und Meta-Wahrnehmungen der übergeordneten Gruppe im Sinne von Wahrnehmungen der Prototypikalität beider Subgruppen für die gemeinsamt Gruppe untersucht. In Studie 3 wurde der Einfluss von Repräsentationen der übergeordneten Grupe im Sinne von Akkulturationsorientierungen oder Präferenzen, wie sehr die Minorität sich an die Mehrheitskultur anpassen versus die eigene Kultur beibehalten sollte, längsschnittlich getestet.

In allen Studien wurde gleichermaßen gefunden, dass Mehrheit und Minderheit in ihren Vorstellungen der übergeordneten Gruppe nicht übereinstimmen. Wie erwartet dachte und wollte die Mehrheit, dass die Minderheit weniger (und die eigene Gruppe mehr) innerhalb der übergeordneten Gruppe vertreten ist. Dagegen nahm auch die Minderheit eine relativ stärkere Position der eigenen Gruppe wahr, sowohl hinsichtlich relativer Prototypikalität als auch in Bezug auf ihren Wunsch nach Erhalt der eigenen Kultur im Gegensatz zu Anpassung an die Mehrheitskultur. Weiterhin glaubten sowohl Minderheit als auch Mehrheit, dass ihre Fremdgruppe eine andere Sicht als die eigene hatte, nämlich dass die Fremdgruppe die Eigengruppe in einer schwächeren Position (und sich selbst in einer stärkeren) sah. Bezüglich der Vorhersage von Intergruppeneinstellungen durch Repräsentationen der übergeordneten Gruppe bestätigten die Studien direkt (Studien 1 und 2) oder indirekt (Studie 3) die Hypothese, dass sich Meta-Wahrnehmungen, die der Eigengruppe eine weniger vorteilhafte Position innerhalb der übergeordneten Gruppe zuschreiben, negativ auf die Intergruppenbeziehung auswirken. Gleichzeitig, der Theorie sozialer Macht entsprechend, zeigten sich Meta-Wahrnehmungen als primärer Prädiktor für hoch identifizierte Minderheitsmitglieder, während innerhalb der Majorität die eigene Wahrnehmung die Haupt-Vorhersagekraft hatte. Der Annahme folgend, dass Minderheitsmitglieder, die sich stark mit beiden Seiten verbunden fühlen, sich nicht von der Majoritätsperspektive bedroht fühlen, war ihre eigene Repräsentation statt der Meta-Repräsentation der wesentliche Prädiktor von Intergruppenauswirkungen.

Zusammengefasst konnte diese Dissertation die Bedeutung von Meta-Wahrnehmungen auf der Ebene übergeordneter Gruppen zeigen, indem ihre Funktion als soziale Identitätsbedrohung – insbesondere für von der Mehrheitsposition abhängige Minderheiten – spezifiziert wurde. Dies ergänzt und erweitert unser Verständnis über die Rolle von übergeordneten Gruppen in Intergruppenbeziehungen. Diese Arbeit leistet weiterhin einen Beitrag zum theoretischen und empirischen Fortschritt der Differenzierung verschiedener Identitätstypen innerhalb von Minoritäten, und zieht nicht zuletzt Schlussfolgerungen bezüglich des Beitrag von komplexen Repräsentationen der übergeordneten Gruppe für verbesserte Beziehungen zwischen Subgruppen, die durch ungleiche Status- und Machtpositionen gekennzeichnet sind.

Ehrenwörtliche Erklärung

Ich erkläre hiermit, dass mir die Promotionsordnung der Fakultät für Sozial- und Verhaltenswissenschaften bekannt ist. Ferner erkläre ich, dass ich die vorliegende Arbeit selbst und ohne unzulässige Hilfe Dritter angefertigt habe. Alle von mir benutzten Hilfsmittel, persönliche Mitteilungen und Quellen sind in der Arbeit angegeben.

Bei der Datenerhebung und Dateneingabe haben mich Herr Özcan Yazici und Frau Vivien Raffel in ihrer Funktion als studentische Hilfskräfte unterstützt. Die Übersetzung ins Türkische (und Rück-Übersetzung) des Fragebogens für Studie 1a hat Frau Aysun Ertan (vereidigte Übersetzerin) vorgenommen Weitere Personen waren an der inhaltlich-materiellen Erstellung der Arbeit nicht beteiligt. Insbesondere habe ich hierfür nicht die Hilfe eines Promotionsberaters in Anspruch genommen und Dritte haben weder unmittelbar noch mittelbar geldwerte Leistungen von mir für Arbeiten erhalten, die im Zusammenhang mit dem Inhalt der vorgelegten Dissertation stehen.

Die Arbeit wurde weder im In- noch im Ausland in gleicher oder ähnlicher Form einer anderen Prüfungsbehörde vorgelegt. Weder früher noch gegenwärtig habe ich an einer anderen Hochschule eine Dissertation eingereicht.

Ich versichere, dass ich nach bestem Wissen die reine Wahrheit gesagt und nichts verschwiegen habe.

Ort, Datum Unterschrift